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HARVARD BUSINESS REPORTS

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FOREWORD

THIS volume marks an important development in the plans for publishing the *Harvard Business Reports*. The cases reported in the first volume were without comment or analysis, but in the present volume there is included with each case a commentary, prepared usually by a member of the School faculty. Commentaries for most of the cases in Volume 1 also have been prepared, and are published in a special section of the present volume, commencing on page 379.¹

It is hoped that the commentaries, by pointing out significant aspects of the cases, will be of value to business executives who are interested in similar situations. Each commentary represents solely the opinion of the commentator; the School itself does not undertake to lay down specific principles or rules. The inherent difficulties of fully reporting all the aspects of a business situation are recognized. The School is not unaware of the likelihood that the significance of individual cases may have been altered by the presence of unreported facts. Thus in some instances where the commentator's conclusion differs from that of the business executive, the latter may have known of important factors not disclosed in the report. In other instances, however, the commentator may have come to a dissenting conclusion through assigning controlling weight to factors other than those emphasized in the companies' decisions. The opinions of the commentators, furthermore, may be modified later in accordance with advances made in the several fields as the result of additional research, and for that reason the date of writing is indicated on each commentary.

The initials only of the commentators are signed to the commentaries; a reference table has therefore been included, on

¹ For convenience of reference, the titles of the 139 cases in Volume 1, for which commentaries are printed in the present volume, are included in the list of cases on pages v to xx. It is planned to include in Volume 6 commentaries on the other 10 first-volume cases as listed below:

Farber Bond Company	I H.B.R. 495	Wigton and Company	I H.B.R. 488
Melbourne and McCaffery	I H.B.R. 512	Wilbert and Company	I H.B.R. 497
Tufton and Bates	I H.B.R. 502	Wills and Company	I H.B.R. 500
Wald and Jamson	I H.B.R. 515	Wittmer and Company	I H.B.R. 492
Walman and Company	I H.B.R. 509	Zella and Company	I H.B.R. 504

pages xxi-xxiii, wherein are listed the names of the commentators, with their positions in the School.

Through the publication of cases with commentaries in this and subsequent volumes, it is hoped to make available to business men a body of reference material which, though it will in no sense directly control the solution of new problems as they arise, may serve to stimulate thought and to broaden the scope of inquiry.

The School realizes that the full usefulness of this material will be approached only when a substantial number of volumes have been published. Since the variety of cases in any single volume or small group of volumes is necessarily limited, comparative analysis of similar or contrasting cases will be dependent, in the main, upon constant additions to the number of cases reported. To provide adequately for ready reference as the series grows, it is planned to publish from time to time cumulative index-digests. These will be somewhat similar to those already in use in the legal profession, and will provide for business executives a means of finding promptly all the experiences reported bearing on specific situations.

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¹With the exception of a few cases, fictitious names have been used for the purpose of disguise.

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¹ Unless otherwise stated, titles are those in the Graduate School of Business Administration, George F. Baker Foundation, Harvard University, at the date of the commentary.

² Where a page number refers to more than one commentary by the same author, the number of such commentaries appears in parenthesis.

³ Faculty of Arts and Sciences, Harvard University.

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HARVARD BUSINESS REPORTS

VOLUME 2

HARVARD BUSINESS REPORTS

CENTRALIA EASTERN RAILROAD¹

RAILROAD ORGANIZATION—*Divisional Organization Substituted for Departmental.* Before 1916, a railroad handling dense freight and passenger traffic in a compact, densely populated industrial territory, operated under the departmental plan. The three central departments were represented in each division by co-equal officials: a division superintendent was in charge of stations, yards, and trains; a division engineer was responsible for maintenance of way and structures; and a master mechanic was in charge of maintenance of equipment outside the general shops. In 1916 the railroad changed to the divisional plan of organization whereby in each division the superintendent was placed in full charge; the engineer and master mechanic became his subordinates. The decision was made in an attempt to conform to the policies of some other railroads, to develop the superintendents for higher positions, and to improve the divisional esprit de corps. The superintendents' lack of technical training and the pressure of their own work made the change unsuccessful.

RAILROAD ORGANIZATION—*Departmental Organization Reinstated, with Modifications.* In 1921, a time of peculiarly difficult operating conditions, a railroad handling dense freight and passenger traffic in a compact, densely populated industrial territory, recognized that the divisional plan of organization adopted five years before was not successful. The former departmental plan, whereby in each division the division superintendent, division engineer, and master mechanic had co-equal authority and were controlled directly by the three corresponding central departments, had persisted in fact despite the official placing of the division superintendents in full charge of their divisions. Because those superintendents had inadequate technical training and were heavily burdened by their original duties, and because the system was relatively compact, the railroad reverted to the departmental organization but with instructions to officials, which would maintain the advantages of cooperation inherent in divisional organization.

(1916-1924)

The Centralia Eastern Railroad served a densely populated industrial territory. The traffic on its main lines was relatively very dense, particularly in passenger service, but the system, made up of about 2,400 miles of road, embraced many lateral

¹ Fictitious name used for purpose of disguise.

branch lines on which the volume of traffic, both freight and passenger, was relatively small. For operating purposes the system was divided into 3 districts and 10 divisions. The total number of employees, in 1924, was about 34,400, of whom about 31,000 were in the operating and maintenance departments.

In 1916 the operating organization was changed from departmental to divisional. The division superintendents, whose authority prior to that time had been confined to the operation of stations, yards, and trains, were given jurisdiction over the maintenance of way and structures and the maintenance of equipment outside of the general shops. The division engineers and the master mechanics were thus subordinated to the superintendents. The change was made to make the Centralia Eastern Railroad's organization conform to that of most of the large railroad systems which operated under the divisional plan, to give the superintendents authority over, and responsibility for, maintenance as well as transportation activities, and to afford an opportunity to broaden and develop the superintendents for positions of higher responsibility. It was believed that, once the divisional plan was working smoothly, there would be an improvement in divisional esprit de corps. The former plan had tended to glorify the department rather than the divisional whole.

In view of the fact that few of the superintendents had had experience outside of the transportation department, it was anticipated that the divisional plan might not work to its fullest advantage during the first few years. The probability was that the cautious might hesitate to assume authority in technical matters connected with maintenance; the headstrong might rush in beyond their depth and antagonize the division engineers and master mechanics. These technical officers might look with disapproval upon a plan which would place them under the jurisdiction of a superintendent untrained in engineering, although the forward-looking engineer probably would realize that the new plan opened up to him wider opportunities for promotion since the engineers, both civil and mechanical, would have an equal chance with the trainmaster when a new superintendent was to be selected. In fact, the engineers might be expected to receive preference because under the divisional plan it would be desirable to select candidates who had technical training as well as other qualifications essential to success in a superintendency. On the

whole, however, the new engineering subordinates of a superintendent might not be keenly interested in making the new plan a success. In this attitude it was possible that they would be encouraged indirectly by the heads of the maintenance and mechanical departments, who would not be entirely happy in the loss of direct contact with, and authority over, the divisional officers of their respective departments.

While these possibilities were anticipated, and while the management was prepared to go through a trying period of adjustment in which the executive officers would have to exercise patience and tact, the results were less satisfactory than were expected. Partly because the superintendents thought it best to "play safe" and avoid the possibility of personal embarrassment if they took a too active interest in maintenance of way, structures, and equipment, but mainly because they found that their strictly transportation responsibilities, if conscientiously discharged, left them little time to become oriented in their wider field, the superintendents, with few exceptions, took relatively little interest in maintenance. The division engineers and master mechanics, consequently, were left to manage their technical affairs much in the same manner as before the change was made. Because of this, it naturally followed that the division engineers and the master mechanics continued to look to their department heads for guidance and instructions rather than to the superintendents, and the heads of the two technical departments continued their direct contact with the divisional technical officers instead of confining their attention to the formulation of standards and regulations as they were expected to do under the divisional type of organization. Consequently, the organization on the official chart and the organization in fact were not consistent. The chart indicated that the divisional plan was in force; the fact was that the departmental plan was being continued.

In deciding, in 1921, after five years' experience with the divisional plan, that its advantages elsewhere could not be realized in sufficient degree on the Centralia Eastern Railroad, the management adopted a form of organization which was in the nature of a modification of the departmental plan. In abandoning the straight divisional plan, the management was influenced by three major considerations. The first was that it would take too many years to train its superintendents, brought up under

the departmental organization, practically all promoted from trainmasters, chief dispatchers, or yardmasters, to make the most of the greater opportunities under the divisional plan. The full advantages of that plan could not be realized until in the normal order of promotion a new set of superintendents had been trained in subordinate positions under the divisional system. As the road was then operating under trying conditions of congestion of traffic and a high percentage of unserviceable locomotives and cars, it was risky to continue the experiment.

The second reason for reverting toward the old plan was that the experiment brought out clearly the extraordinary burdens of supervision of the transportation activities on the division. A fairly heavy volume of freight was accompanied by an exceptionally heavy volume of passenger traffic. The superintendent had about all that he could do well in controlling the movement of trains and supervising the operation of terminals, stations, and yards. The divisional plan of organization, when followed literally, divided the superintendent's time in such manner that the transportation service suffered from lack of supervision in proportion to the effort made by the superintendent to become familiar with and direct activities in maintenance, a field where his talents had least play.

The third reason for abandoning the straight divisional plan was the compactness of the system and the relatively short distance from the general offices to each of the divisional headquarters. The general offices were centrally located. No division office was more than 170 miles from the general offices. It was feasible to hold frequent general conferences without requiring the superintendent to absent himself from his division for more than a day. Under these conditions, centralization of authority was not so objectionable as on railroads, such as the transcontinentals, where the superintendents were scattered from Chicago or St. Paul to the Pacific Coast. On these long lines the divisional system, with its decentralization of control and its large measure of local autonomy, was seen at its best.

While the management of the Centralia Eastern Railroad was frank in admitting that the divisional plan as a whole had not been successful, it desired to retain some of its advantages and, as already stated, it adopted a modified plan in 1921. After three years' experience in the operation of the modified plan, the

circular defining the scope, authority, and responsibility of each officer was revised in part, and a new chart was published in September, 1924. The few differences between the definitions and the chart of 1921 and those of 1924 affected but minor details. The description and discussion of the modified plan are based on the organization circular and chart of September 1, 1924. Consideration is here confined to the operating department, but the circular and chart covered all departments.

The organization chart, shown as Exhibit 1, indicates that the superintendents worked under the strictly departmental plan. They reported directly to a general superintendent who, in turn, reported to the general manager. In matters related to distribution and use of equipment, and to coordination of train service, the superintendent, as well as the general superintendent, reported to a superintendent of transportation, a staff officer who acted for the general manager.

The division engineer, who had direct jurisdiction over maintenance of way, structures, and signals, was independent of the superintendent and reported to a district maintenance engineer. That officer, in turn, reported to an engineer of maintenance of way who was subordinate to an assistant general manager.

In like manner, the master mechanic was made independent of the superintendent. The master mechanic had jurisdiction over enginehouse foremen, foremen of outside car repair facilities, and road foremen of engines. The master mechanic was responsible to a district mechanical superintendent who reported to a mechanical manager. The latter reported directly to a general manager.

The chart indicates that division engineers and master mechanics were coordinate with division superintendents. The design of the chart was intended to portray five horizontal planes of authority. At the head was the president. He represented the highest executive plane. Next came the general manager, also on an executive plane but below the chief executive. Then came the assistant general manager, who exercised authority over maintenance of way, the mechanical manager, and the superintendent of transportation. These were on the plane of sub-departmental heads. Next, on the district plane, came the general superintendents, district maintenance engineers, district

mechanical engineers, and superintendents of general shops. Then came the divisional plane with superintendents, division engineers, and master mechanics. Finally, in the subdivisioanal plane were a miscellaneous group of minor officials reporting to divisional officers.

The chart, however, was accompanied by a circular which defined authority and responsibility in broad terms and set forth certain principles which should govern interdepartmental relations. On its face, the chart was the straight departmental plan, yet the circular implied a modification which leaned toward the continuation of the spirit of the divisional plan.

The first two paragraphs of the circular read as follows:

ORGANIZATION represents the relationship between officers, employees, and departments. Its success depends on the action of each individual in carrying responsibility; in exercising authority; in adhering to the regular methods in respect to orders, instructions, regulations and discipline; and in cooperating with all others for team-play in every matter relating to the interest of the company. It takes at least two to cooperate. In the highly successful organization, every man becomes a leader in the work at hand; credit attaches automatically, but never from the evasion of responsibility. There is no room in any organization for factions.

A policy or program cannot become effective until every one who must participate has been fully informed. In a large degree, that which is termed AUTHORITY rests on the success of the superior in outlining to juniors, through advance discussions and conferences, the plans, methods, and policies under the various circumstances that may arise; and in turn on the part of the juniors, in informing the superior in the same manner of the conditions, situations developing, and problems and prospects that are in sight, with an outline of the plans and methods under way for meeting and handling the same. Thorough information and full mutual understanding are absolutely necessary to secure that which results in final analysis as authority.

The foregoing quotations referred to general principles. Another section of the circular dealt specifically with the authority of the general, district, and division officers of the operating department:

General superintendents and superintendents are responsible to the public and to other jurisdictions for all matters relating to service, for trains of every character, and for the proper use and full protection of the company's property. Maintenance engineers and mechanical super-

intendents are staff officers of, and office with, general superintendents. Division engineers, master mechanics, division accountants, division storekeepers, and captains of police are staff officers of, and office with, division superintendents. The responsibility of each to the general superintendents and to the superintendents is that of direct cooperation and supporting service.

The remainder of the circular dealt with other departments and with rules for office procedure, keeping of records, protection of property, additions to pay-rolls, capital expenditures, and other general matters. The concluding paragraph has a bearing on the specific field herein considered as it relates to relations between the senior and junior officers:

The most successful organization results not from the establishment of bureaus and clerkships, but from delegation of responsibility to the officer or employee below, who presumably is qualifying as a future successor. Give juniors free and full opportunity. Encourage them to initiate ideas. Supervision from the desk, by telephone or correspondence, is less effective than through personal contact on their own ground with the representatives of the public and with those performing the service. The results for the property as a whole are unified and enlarged by coordination in the undertakings of all, individually and jointly. Reduce post mortems but prevent recurrences.

The basis for the statement made earlier that the chart was modified by the circular lies in the phrases contained in the second quotation: "Maintenance engineers and mechanical superintendents are staff officers of, and office with, general superintendents," and "Division engineers, master mechanics . . . are staff officers of, and office with, division superintendents." If the division engineer and the master mechanic were staff officers of, and occupied offices en suite with the superintendent, the implication would be that the superintendent was the superior officer. Yet the chart showed that they were coordinate, and as a matter of fact, they were coordinate.

In this apparent inconsistency lay the principle of the modification. Conceding that the experiment under the divisional form of organization had not worked satisfactorily, the president of the company directed that, so far as the organization chart and ultimate authority and responsibility were concerned, the departmental form should be restored, but that the cooperative spirit of the divisional plan should be preserved. While, in fact, the division engineer was independent of the superintendent, the cir-

cular laid down the principle that even though independent he would consider himself on the staff of the superintendent and would share offices with him, to the end that local coordination would be brought about and departmental walls broken down. The aim was to insure departmental independence and specialization, but not to a degree that would work against effective cooperation. To the division engineer and the master mechanics were restored their former independence in their fields of technical specialization, but they were officially informed by the highest authority that they must regard themselves as attached to the superintendent as his technical associates and that they must work as much for the operating division as for the technical department.

Supplementing the circular the president addressed a personally signed note "to those who are actually managing the road—to each and every officer." It pointed out that the strength of a railroad lies in its organization and that the strength of the organization depends upon mutual understanding of responsibility and authority. Such organization, he said, must be built upon personal contact and human appreciation; no management can function successfully merely as a machine. Then he called attention to the chart and the circular and enjoined the officers not only to study them carefully, but to *read between the lines*. The last phrase, although not underlined in the original personal note, appeared to be a very important part of the message and probably had direct reference to the relations between the transportation officers and their coordinate technical associates.

COMMENTARY: This case gives an excellent background for discussion of the relative merits of the divisional plan and the departmental plan of operating organization. The divisional plan is used more extensively than the departmental, especially on railroads having 3,000 or more miles of line. Notable among the exceptions is the New York Central Lines, which adheres to the departmental idea. The Pennsylvania, Baltimore & Ohio, and Erie, companion trunk lines, operate under the divisional plan. In the case of smaller roads, the departmental type of organization is typical.

From the view-point of the chief executive, the greatest administrative problem under the departmental plan is to coordinate departmental activities so that each department will be conducted for the good of

the whole rather than solely from the single departmental view-point. The departmental plan ordinarily insures a relatively high degree of skill in technical administration of maintenance work, but such work is not always harmonized effectively with operation. By operation is meant here the running of trains, the utilization of locomotives and cars, and the operation of yards, terminals, and stations.

On the other hand, the chief administrative problem under the divisional plan is the coordination of operating divisions and districts, especially in maintenance policies. While under the departmental form there is danger of overemphasizing the department and setting up watertight compartments which tend to lower operating efficiency, under the divisional plan there is danger in the possibility that the operating function—the actual production of transportation—may be unduly stressed to the detriment of physical maintenance.

On the small road the chief executive ordinarily can control departments so as to develop the best in each by relative independence, and at the same time he can insure the desirable degree of coordination for the smooth working of the whole organization. This is more difficult in the case of a larger system. Here, under the divisional plan the function of maintenance is decentralized, as explained in the case, and the technical features are controlled by staff officers who set up standards and prescribe methods, and control the administrative features by inspection.

The Centralia Eastern is a border-line case. In mileage it is not large—2,400 miles of line—but its traffic is said to be “relatively very dense.” The number of employees, 34,000, is more than that of the typical railroad of much greater mileage. Per mile of line the Centralia Eastern has 14 employees; the average for all railroads is less than 7. This case, therefore, could not be decided solely by the test of line mileage.

In this case the Centralia Eastern, originally of the departmental type, had tried the divisional plan, found it to be less desirable than the departmental, and had reverted to the original form of organization. The chief interest and significance lie in the reasons which led to the change and subsequent abandonment of the divisional plan, and in the reasons which convinced the management that the divisional plan, although preferred elsewhere on railroads of similar magnitude in transportation production, was unsuitable for the Centralia Eastern. Of almost equal interest is the unique attempt of the president to preserve the spirit of the divisional plan despite a return to departmental organization.

The reasons for giving up the divisional plan are clearly stated: (1) the superintendents had not been trained under it and could not rise to

their broadened opportunities; (2) traffic was so dense and operating burdens were so heavy that the superintendents could do no more than control the operation of trains, yards, terminals, and stations; and (3) the compactness of the system and the relatively short distances between the central offices and the division headquarters minimized the importance of local autonomy and insured a reasonable degree of freedom from departmentalization.

Of the three reasons, that last given was of the greatest importance. The first was a temporary drawback. In time the superintendents could have been trained adequately. A part of the difficulty in this case may have been an undercurrent of opinion that the divisional plan would not be successful and would soon be abandoned. If this was the case, the superintendents were not likely to extend themselves at the risk of making enemies among their technical subordinates who might, in a short time, be their associates of equal official standing. All innovations require a period of time in which the officials and employees must adjust themselves to new conditions. If the inexperience of superintendents had been the sole disadvantage, it is not likely that the experiment would have been abandoned. As had been done elsewhere, the superintendents, in self-defense, would have become competent, or would have been displaced by others who could have adapted themselves to the new order of things.

Nor was the second reason controlling. It was probably true that the supervisory demands of transportation upon the superintendent were so great as to preclude an adequate supervision over maintenance, yet that difficulty could have been met by the appointment of assistant superintendents. The divisional plan is admittedly more expensive, but the additional expense has been found to be fully justified by better supervision on other roads where that plan is working successfully. In this case the management evidently did not consider it wise to assume the expense of giving the superintendent more assistance, even though the new plan added substantially to his duties and responsibility.

The third reason apparently was the major consideration. The ability to hold frequent meetings of division superintendents without requiring them to absent themselves from their divisions more than a day at a time, insured divisional coordination with minimum of effort or interference with operation. At these meetings, presumably, the general manager would have the mechanical manager and the engineer of maintenance or their representatives so that departmental walls could be broken down. Thus, without disturbing existing relations, one of the principal objectives of the divisional plan could be accomplished.

We have no information as to the success of the unique feature of the restoration of the departmental form of organization. Its success

probably depends upon the personality of the president and his persistence in driving into the minds of the maintenance and mechanical officials the thought that even though there is departmental independence the division engineer or the master mechanic must consider himself as an officer on the staff of the division superintendent. Much will depend also upon the personality and tact of the division superintendent. In publishing a chart which indicated that these technical officers on the division were independent of the superintendent, and, at the same time, publishing a letter which instructed these officers to consider themselves on the staff of the superintendent, there was an apparent violation of the principles of organization, but an anomaly of the kind may be justified by peculiar conditions and may be successful when supported by the will of the commander-in-chief.

February, 1926

W. J. C.

WESTBROOK RAILROAD¹

FREIGHT CLAIMS—*Reduction in—Settlement by Local Freight Agents.* A railroad company concluded that it might be able to reduce the amount which it paid in the settlement of claims for loss and damage to freight by securing the cooperation of shippers in packing merchandise carefully for shipment. As a means of obtaining the good-will of shippers, the railroad decided to attempt to reduce the time required for the settlement of small local claims by permitting local freight agents to pass upon certain claims of \$50 or less instead of requiring settlement to be made through the central office as before. The plan was successful.

FREIGHT CLAIMS—*Settlement by Local Freight Agents—Limitations on Agents' Authority in Order to Protect Railroads.* A railroad decided to try to shorten the time required for the settlement of claims for loss and damage to freight by permitting local freight agents to pass upon certain of them instead of requiring settlement to be made through the central office as before. Because it realized that freight agents at small stations might allow unwarranted claims in order to obtain the business or good-will of certain shippers, and because many claims required extensive investigation and collection of data from several sources, the railroad decided to limit the claims which could be settled locally at important freight stations to those which were for \$50 or less and which did not require extensive investigation.

FREIGHT CLAIMS—*Control of—Records at Central Office.* A railroad decided to try to shorten the time required for the settlement of claims for loss and damage to freight by permitting freight agents at important stations to pass upon certain claims for \$50 or less, where extensive

¹ Fictitious name used for purpose of disguise.

investigation was not necessary, instead of requiring settlement to be made through the central office as before. Because a centralized record of all claims was necessary, and because it was desirable to keep a close check on the agent's claim settlements, the railroad required the local agents to submit the claims after settlement to the freight claim agent.

(1922)

The Westbrook Railroad operated over 2,000 miles of line in a highly developed industrial section of the United States. The railroad's freight traffic was heavy; an unusually large percentage of it was in less-than-carload lots. Less-than-carload shipments especially were likely to be lost in whole or in part or damaged in transit.

During 1918, 1919, and 1920, the total annual amounts which railroads paid in settlement of freight claims rose to unprecedented heights. In 1920, when private managements resumed control of the railroads, the executives of these railroads sought to improve relations with patrons. In both 1920 and 1921 the amount which the Westbrook Railroad paid in the settlement of claims for loss and damage to freight was slightly less than 4% of total freight revenues. The Westbrook Railroad, therefore, began a serious attempt to reduce the amount which the railroad had to pay in the settlement of claims.

Among the many causes of loss or damage to freight, there were two which the railroad could endeavor to remove. One was the negligence of its employees, and the other was the carelessness of shippers in the packing of goods. The management, therefore, conducted an intensive claim prevention campaign among its employees to improve conditions in its own organization. The railroad concluded that the most effective way to correct the second difficulty was to secure the cooperation of shippers and receivers of freight through increased good-will.

Up to that time, freight claims for loss, damage, or delay on the Westbrook Railroad were settled by the freight claim agent at the main office of the railroad. When a claim was received at the office of the freight claim agent, the document was sent immediately to the local freight agent at the station where the freight had been received. The agent returned the claim with his record of having received the shipment and his recommendation. The freight claim agent's office acted upon the local agent's

EXHIBIT I

**FREIGHT CLAIMS FOR LOSS, DAMAGE, OR DELAY SETTLED DURING ONE
CALENDAR MONTH BY THE WESTBROOK RAILROAD, SUBDIVIDED
INTO LOCAL AND INTERLINE CLAIMS, AND CLASSIFIED
ACCORDING TO AMOUNTS PAID**

CLASSIFICATION OF AMOUNT PAID IN SETTLEMENT OF CLAIMS	LOCAL CLAIMS		INTERLINE CLAIMS	
	Number of Claims	Percentage of Total	Number of Claims	Percentage of Total
\$5 or less	2,769	48.7%	1,315	59.4%
\$5.01—\$10	994	17.5	372	16.8
\$10.01—\$50	1,402	24.7	403	18.2
Total \$50 or less . . .	5,165	90.9	2,090	94.4
Over \$50	517	9.1	125	5.6
Total	5,682	100.0	2,215	100.0

recommendation except when suspicion attached to the claim. In such instances, further investigations were made.

The process of carrying claims through to settlement was slow because of the frequent necessity of continued correspondence between the freight claim agent and the local agent, or between the freight claim agent and the claimant. Claims, even those for small amounts, seldom were settled in less than one month.

The railroad paid two types of freight claims for loss, damage, or delay; namely, local and interline. A local claim was one filed respecting freight which only the Westbrook Railroad had carried. An interline claim was one pertaining to freight which the Westbrook Railroad and one or more other railroads had transported in a continuous haul. All the railroads concerned, therefore, contributed to the amount paid in settlement of interline claims for unlocated loss or damage.

The claims which the Westbrook Railroad settled during one calendar month were classified, as shown in Exhibit 1, by amounts paid, and according to whether the claims were local or interline.

During the month noted, the Westbrook Railroad settled 5,682 local freight claims and 2,215 interline freight claims; 5,165 of the local claims, or approximately 91%, and 2,090 of the interline claims, or approximately 94%, were settled for amounts not exceeding \$50. The Westbrook Railroad believed that it could

improve its relations with shippers if it reduced the time taken in settling this group of claims. Shippers were especially impatient over the settlement of claims for \$50 or less, because the amounts were so small that delays seemed unnecessary.

The executives thought that it was impracticable, without a substantial increase in the office force, to attempt to reduce the time taken for claims to pass through the freight claim agent's office. It was necessary, however, for all claims to go through a central agency at some time, and preferably through the freight claim agent's office, because an important element in freight claim prevention was the classification of the types of claims and the determination of the causes for the loss, damage, or delay which had occasioned the claims, so that the railroad could direct its activities most effectively.

The executives believed, however, that it might be feasible to permit local agents to settle claims for \$50 or less, and to require the local agents to submit the claims, after settlement, to the freight claim agent's office. Such a plan had worked well on another railroad.

There were disadvantages, however, in this plan. Station agents in communities where the volume of freight was small were generally on friendly terms with shippers and receivers of large quantities of freight, or with their representatives. In the settlement of claims, therefore, an agent, purposely or not, might show favoritism. In a small or moderate-size community, furthermore, the local station agent usually solicited freight traffic, and the volume of new business he secured was one of the factors the railroad considered when it promoted a station agent. Local agents, therefore, might use the promise of liberal claim payments as a means of securing for the Westbrook Railroad new traffic or traffic which other transportation companies previously had carried. The railroad, furthermore, might not detect such collusion at unimportant stations for an indefinite time, since the volume of traffic at a local station had influence on the frequency of headquarters and division officials' supervisory visits to that station.

Interstate Commerce Commission inspectors, in their periodical examinations of railroad accounts, were ever on the watch for evidences of rebating or unfair discrimination in the form of liberal claim payments. If the commission disclosed any form of

discrimination, the railroad concerned was liable to prosecution. All railroads were especially vigilant to prevent even a semblance of discrimination in any of their activities.

The executives realized, furthermore, that the settlement of some classes of claims required the collection of data from several sources, irrespective of the amounts involved. For instance, a package sometimes was left at the wrong station because of incorrect markings. The railroad, therefore, did not settle a claim for the shortage of an entire package until all the stations on the line had had time to report any unclaimed packages which they might have had.

In addition, extensive investigation usually was required for the settlement of claims occasioned by the following: shortage in the contents of a bulk carload shipment of coal, grain, or similar commodity; damage from freezing, improper refrigeration, decay, or delay; concealed loss or damage: namely, shortage of, or damage to, the contents of a package which appeared from the outside to be intact; and loss or damage from fire, wreck, or flood.

In 1922 the Westbrook Railroad decided to authorize its local agents at important freight stations to settle freight claims which did not exceed \$50 and which did not require extensive investigations. The principal classes of claims which the local agents were to be empowered to settle were those for visible damage or loss, with the exceptions noted above, and for concealed damage to furniture. In general, the plan was to be operative at any station which required more than four men for freight traffic, and which received a substantial number of claims of the classes to be settled locally. The types of stations at which the specified kinds of freight claims were to be settled were of sufficient size to receive frequent supervisory visits from divisional and headquarters' officials. This fact minimized the possibility of collusion between agents and customers in the settlement of claims.

Claims were to be paid by the agents only after they were satisfied that the claims were valid and for reasonable amounts. The agents, however, were not to have authority to decline claims. If an agent thought that a claim should be refused, he was to refer the claimant to the office of the freight claim agent. Each payment was to be made by a draft bearing the personal signature of the agent. The stub of the draft, properly filled

out, and the claim itself were to be sent to the freight claim agent as soon as the payment was made. The freight claim agent's office was to make a report monthly on a prescribed form to the general manager's office. The report was to give the pertinent facts concerning each claim settled locally, including the amount claimed and the amount paid.

The number of stations at which local agents settled small claims was increased continually; by August, 1924, more than 2 years later, the local agents at 47 stations were authorized to pay small claims. The Westbrook Railroad was satisfied with the results of the experiment. There was increased good-will between the company and its customers. Although local agents were settling only 10% of the total freight claims, the effect of this prompt service was believed to be responsible to a large extent for the 50% decrease in the number of freight claims made between 1922 and 1924. The operation of the plan did not affect appreciably the quantity of work performed in the freight claim agent's office, since each claim after payment was examined there as carefully as if it were to be settled by that office.

COMMENTARY: This case illustrates a practice which is growing in favor. Nothing is much more irritating to a shipper than a delay in the settlement of a claim concerning which there can be no doubt of carrier liability. The shipper cannot understand the necessity for what he regards obstructive red tape, and when opportunity comes he is likely to give his patronage to another carrier.

Emphasis seems to be placed here on the desirability of gaining good-will so as to insure cooperation in better methods of packing. Of perhaps greater importance are the fruits of public good-will in traffic solicitation and in the general attitude toward carriers.

Attention is properly directed to the phase of governmental inspection. When rebates were declared unlawful, the law was frequently evaded by a continuation of rebates in the form of excessive or fraudulent claims. Any plan for expediting the settlement of claims should provide for an adequate check upon their validity. The inspectors of the Interstate Commerce Commission are alert in their efforts to prevent disguised rebating in that form.

Beyond the fact that a local freight agent has a better standing in the solicitation of traffic when he is authorized to settle claims promptly without reference to headquarters, there are other favorable influences. The additional authority gives the agent greater local prestige. An

agent of the right type is likely to respond to that confidence in him by greater interest and zeal in his work, particularly in attempting to meet criticism and otherwise aid in creating a local friendly regard for his company.

The case states that 91% of the local claims in one month were for \$50 or less and that these claims were 5,165 out of a total of 7,897, local and interline combined. After two years with the new plan in effect at 47 stations, a small percentage of the total number of freight stations on this railroad, the local claims settled by local agents at these stations were 10% of the total claims, which presumably included both local and interline claims filed on the entire railroad. The statement that prompt settlement of 10% of all claims was "responsible to a large extent for the 50% decrease in the number of freight claims made between 1922 and 1924" would seem to require further proof.

February, 1926

W. J. C.

SOUTHERN RAILWAY SYSTEM

BONUS PLAN—*Wage Increases Contingent on Operating Efficiency.* The Southern Railway System, in following the lead of another carrier in granting a 5% increase in the wages of employees in train and yard service, decided to go further by making additional increases contingent upon the operating ratio in engine, train, and yard service. A flat 5% increase was agreed to for 1924, with a further contingent increase of 1.5% in 1925, and a still further contingent increase of 1.5% in 1926, if the proportions of total operating revenues taken by a selected list of train and yard expenses in 1924 and 1925, respectively, were no greater than the proportion taken in 1923. The plan was accepted by the employees. In 1924 the train and yard service operating ratio was less than in 1923, and the employees were assured of the extra bonus of 1.5% on 1925 wages. The plan was successful in stimulating the interest of employees in train and yard efficiency.

(1924)

Effective March 1, 1924, the Southern Railway System executed agreements with its employees in engine, train, and yard services. These employees were represented by the local general chairmen or the executive officers of the four train and yard service brotherhoods, namely, the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors, and the Brotherhood of Railway Trainmen. The organization last named represented yard conductors, yard brakemen, and yard switch-tenders, as well as

train baggagemen, train brakemen, and train flagmen. Three separate agreements with these organizations were executed, one for enginemen, one for firemen, and one for conductors, trainmen, and yardmen. An agreement was made also with train dispatchers below the rank of chief train dispatcher.

The rates of pay for these classes of employees in the 1924 agreements were advanced about 5% over those in the agreements which were superseded. That rate of increase was substantially the same as had been granted previously by the New York Central Lines. In both cases the increase was granted voluntarily by the management after direct negotiations with the employee representatives. The issue had not been presented to the United States Labor Board. Appeal to that board would have been the normal and lawful procedure had a controversy arisen with a threat of a strike and consequent interruption in train service.

The policy of the Southern Railway had been to pay the going rates of wages. When the New York Central Railroad granted increases to train and yard service employees, the Southern Railway, evidently being satisfied that the men would not accept a wage rate lower than that granted by the New York Central Railroad, entered into negotiations with these employees with a view to agreeing upon wages and rules coupled with a bonus plan, it being the opinion of the management that the time was opportune for such an effort and that the bonus could be given a favorable send-off by being inaugurated at a time when a general wage increase was to be granted.

The plan, as finally worked out, contained a definite measure of relative efficiency as well as a definite formula for translating the increased efficiency into increased wage-rates. The representative of the employees' organizations approved the plan and it was included as a supplement in the 1924 agreements with enginemen, firemen, conductors, trainmen, yardmen, and train dispatchers.

The ratio of certain train and yard service expenses to total operating revenues was taken as the measure of efficiency. In brief, the plan in addition to the 5% increase from March 1, 1924, provided further that, if that ratio in 1924 were no greater than it was in 1923, the 1925 wages of the employees affected would be supplemented by a bonus equal to 1.5% of the 1925

wages, including the 5% increase of March 1, 1924. Further, if the ratio in 1925 were no greater than it was in 1923, the bonus would be 3% of the wages of 1926, including the 5% increase of 1924. The agreement, which was to remain in effect until March 1, 1927, made definite provision only for the 1.5% bonus on the wages of 1925 and the 3% bonus on the wages of 1926, the continuation of the plan or its modification to be subject to renewed negotiation when the agreement was about to expire. The 1.5% bonus on the 1925 wages, if earned, was to be paid in a lump sum in February, 1926, and the 3% bonus on the 1926 wages, if earned, was to be paid in a lump sum in February, 1927, the last month of the three-year period in which the agreement was to be effective.

With respect to the ratio it was decided that the following operating expense accounts, as defined in the 1914 Classification of Operating Expenses prescribed by the Interstate Commerce Commission, should be considered:

Account Number	Name of Account
378	Yard conductors and trainmen
379	Yard switch and signal tenders
380	Yard enginemen
382	Fuel for yard locomotives
387	Other supplies for yard locomotives
389	Yard supplies and expenses
392	Train enginemen
393	Train motormen
394	Fuel for train locomotives
399	Other supplies for train locomotives
401	Trainmen
402	Train supplies and expenses—other train expenses
415	Clearing wrecks
417	Damage to live-stock on right of way
418	Loss and damage—freight
419	Loss and damage—baggage
420	Injuries to persons

During the year ended December 31, 1923, the total of these expense items for the Southern Railway System was 21.42% of total operating revenues. That figure was taken as the base and was referred to in the agreements as the "test ratio."

In the order of the relative importance of the several items, for the railroads as a whole, locomotive fuel ranked first. Combining yard and road consumption, fuel made up about 36% of the total. Next was trainmen, about 20%, and train enginemen, about 17%. Yard conductors and trainmen made up about 9%, and about 5% each was contributed by yard enginemen and train supplies. Loss and damage to freight made up about 3%. The sum of these items was 95% of the total. The remaining 5% was distributed among the nine other accounts.

The agreement provided that in February, 1925, the ratio of the 17 selected expense accounts in 1924 to total operating revenues of that year should be determined from the accounts of the company. If the ratio were less than 21.42%, the 1923 or test ratio, the management would pay to each employee in the month of February, 1926, as a bonus or added compensation, 1.5% of his total compensation for the year 1925, including the 5% increase of March 1, 1924. The 1.5% was to be the maximum of the bonus. If, however, the 1924 ratio were higher, but not 1.5 points higher, than that of 1923, a proportionate part of the bonus would be paid. If the 1924 ratio were 1.5 points or more greater than the ratio of 1923, no bonus whatever would be paid. For example, if the 1924 ratio were 21.31, or any ratio lower than 21.42, the full bonus of 1.5% would apply; if the 1924 ratio were 21.67, or 0.25 points higher than 21.42, the bonus would be 1.5 minus 0.25, or 1.25%; and, if the 1924 ratio were 22.96, or 1.54 points higher than 21.42, no bonus would apply because the excess would be greater than 1.5.

The same principle was applied to the arrangement for 1926, but the bonus percentage was greater. If the 1925 ratio, taking into account bonus payments, if any, made in that year, were less than 21.42, the test ratio, the employees would receive, in February, 1927, a bonus of 3% of their *regular* compensation for the year 1926. The 1925 bonus, if any, was not to be compounded. If the 1925 ratio were more than the test ratio, but not so much as 3 points greater, the bonus would be 3% minus the points of excess; and, if the 1925 ratio were more than 3 points greater than the test ratio, no bonus whatever would be paid. In other words, if the 1925 ratio were anything less than 21.42, the full 3% bonus would be earned; if the 1925 ratio were 21.72, or 0.3

points higher than the test ratio, the bonus percentage would be 3 minus 0.3, or 2.7%; and, if the 1925 ratio were 24.42 or more, the employees would not be entitled to any bonus as the excess would be equal to or exceed the bonus rate.

The operating results of the year 1924 showed that the ratio of selected train and yard service expenses to total operating revenues was 1.18 points less than the test ratio. The 1924 ratio was 20.24; the test ratio was 21.42. The employees, therefore, in February, 1926, were to receive a bonus of 1.5% of their total compensation for the year 1925. Although it was too early to predict with certainty what the 1925 ratio would be, the indications in April, 1925, were that it would be as good as, or better than, the 1924 ratio, despite the bonus payment of 1.5% to be included in the 1925 expenses. The employees, therefore, were looking forward with confidence to earning the 3% bonus in 1926.

The favorable ratio in 1924 was influenced in part by the price of fuel, which was lower in that year than in 1923. The slightly smaller volume of traffic, however, had an unfavorable influence, although rates had remained stable. The plan contemplated that in a small measure, at least to the degree that they might share in the net results through bonus payments, the train service employees would be partners in the business enterprise. A part of their earnings would be dependent upon operating economies within their control. As partners in the enterprise, they would have a right also to a share of the savings attributable to lower fuel prices or other factors outside their field of influence. The prime purpose of the bonus plan, however, was to enable the employees to participate directly in savings which might be brought about by their own efforts to increase operating efficiency. In the important item of fuel, as a single example, the firemen and enginemen could save large sums by careful methods of firing and manipulation of the throttle and the reverse lever. The bonus afforded an incentive to economize. Inasmuch as yard expenses were a factor in the ratio, the trainmen would have an incentive to keep a check on yard costs and to make sure that trains were fully loaded, the yardmen would be watching for preventable wastes in train operation, and the dispatchers would be watching both. Each group of employees would have a tendency to police every other group.

While the trainmen and yardmen, as partners in the enterprise, shared in the benefit of favorable factors beyond their control, such as lower fuel prices or heavier traffic, they had to assume the risk of having their bonus jeopardized by unfavorable factors likewise beyond their control. An increase in the price of fuel or other materials, a falling off in the volume of traffic, or a rate reduction ordered by governmental authority or made for other proper reasons would add to the difficulties of keeping down the operating ratio. The possibilities, both favorable and unfavorable, were discussed in the conferences before the agreements were executed, and were fully understood by the representatives of the employees. When, as in 1924, an uncontrollable factor, such as fuel price, made easier the task of the employees in keeping down the ratio, the management was willing that the employees should share in the benefit; but the management believed that, in a year when such factors were unfavorable, the employees would be so stimulated to further effort that the resultant economies would keep the ratio below the point where the bonus would be curtailed or eliminated. The company, of course, would gain more by such economies than it would pay out in the form of a bonus.

The general attitude of the train and yard service employees during the year 1924, and at the time of writing this case, April, 1925, had been one of keen interest and hearty cooperation. The operating statistics showed marked gains in efficiency in comparison with 1923. The plan was being watched closely by employees in other branches of the service.

COMMENTARY: This is a case wherein a railroad company, for the first time in recent years, succeeded in introducing a bonus plan in train operation. The principle of the bonus had not been looked upon with favor by the train service brotherhoods; in fact, in 1910 the Atchison, Topeka & Santa Fe Railway Company, which had established a bonus plan under which enginemen and firemen on that road were rewarded individually by extra compensation for fuel economy, was bitterly fought by the Brotherhood of Locomotive Engineers. The enginemen were forbidden by the union officers to accept the bonus, and the railroad management was forced, by the threat of a strike, to discontinue the plan, although a bonus system had been employed for some time and was continued with shopmen and other employees outside of train service.

There is, however, an important difference between the Southern Railway bonus plan and that rejected by the enginemen on the Santa Fe. The Southern bonus, when earned, is shared equally by all employees of the classes named. There is no distinction between individuals or between classes in train and yard service. It is a collective bonus. The Santa Fe plan, on the other hand, gave a bonus to each engineman and fireman according to the fuel performance of the individual engine crew.

It is stated in the case that the Southern Railway followed the lead of the New York Central Railroad when the latter voluntarily gave an increase of 5% to the train-service employees. At the time there was a feeling on the part of some railroad managements that the New York Central should have passed the employees' demands to the Railroad Labor Board, but the company evidently was convinced that an increase in wages was justified and preferred to act independently of the board. The action of the New York Central established a precedent and a standard which the other roads felt obliged to follow, and as a result of negotiations between managements and employees in train-service, the 5% increase was made general.

It is apparent that the management of the Southern Railway was moved to consider its bonus plan because it viewed with alarm the growing tendency to increase base wages, and the continual bickering, discord, and unrest which accompanied wage changes, either upward or downward. The belief of the management probably was that wage agreements, particularly with employees in engine, train, and yard services, should cover long periods, and that the increases during such periods should be through bonus or added payments which, without negotiation, would move upward or downward automatically with the results of employees' efforts, rather than through continual negotiation, either directly with the employees or before the Railroad Labor Board. The bonus plan would permit the inauguration of a desirable wage principle never theretofore, so far as was known, incorporated in any wage schedule agreement between a railroad company and its engine, train, and yard employees.

In this case, then, the Southern Railway employees received as much in increases as was granted to the same types of employees on other roads in its territory, and as an insurance against further disturbances, the Southern Railway employees were promised more. The additional increases, however, were made conditional upon the trend of the expenses which were largely under the control of the employees affected, and the relation of those expenses to operating revenues. As is brought out in the text of the case, the plan makes these employees, at least to a limited extent, partners in the enterprise, since a part of their

wages will be dependent upon the efficiency of operation, the volume of traffic, and the freight and passenger rates.

Thus far the plan has worked satisfactorily both from the view-point of management and labor. The ratio of the specified expenses in 1924 was actually less than in 1923, and from the published returns for a late month in 1925, the ratio in that year will probably be less than in 1923. The employees, therefore, will earn the full bonus of 3% in 1926. The management probably is satisfied because its saving in expenses is greater than its payments for the bonus. The employees were favored by lower fuel costs in both years and a substantial increase in traffic in 1925.

It is interesting to compare this plan with that put in force about the same time by the Baltimore & Ohio Railroad in its general shops.¹ There, a cooperative agreement was made under which the shop employees and the officers of their unions were given some voice in management. The avowed purpose was to increase efficiency through cooperation in management and to stabilize employment. The agreement provided, further, that economies brought about by greater efficiency in shop operation should be taken into account in the fixing of wages, but no definite formula was adopted. So far as the writer knows, there have been no general increases in wage rates, although the published statements of union officials indicate that shop efficiency has increased.² One difficulty lies in the determination of the unit costs controlled by shop employees. There are wide differences between the maintenance costs of locomotives and cars of different types. The general shop costs are affected by running repairs made outside the general shops from day to day. The demand for repairs is proportional in a large part to use, and the nature of use is under the control of train-service employees and others outside the shops. There is no ready-made index such as the selected items in transportation expenses used in the Southern Railway formula, although the Baltimore & Ohio might adopt the principle, if it followed the Southern Railway plan, that a bonus to shopmen would depend upon the ratio of total maintenance of equipment expenses to operating revenues. But, as already noted, a substantial part of such expenses are beyond the control of the men in the general shops. An improvement in costs might be due in greater part to better operation; or an improvement in shop efficiency might be nullified by poorer operation.

February, 1926

W. J. C.

¹ Plan described in detail in *Railway Age*, February 16, 1924, Vol. LXXVI, No. 7, p. 407.

² Beyer, O. S., Jr., "Technique of Union-Management Cooperation," *Railway Age*, February 13, 1926, Vol. LXXX, p. 423.

DURCO MOTORS COMPANY¹

MANUFACTURER—AUTOMOBILES

TRAINING OF SALESMEN—*Educational Classes for Sales Employees.* As a result of an investigation conducted by its sales research department, a company manufacturing high-grade automobiles and selling them nationally through distributors and dealers concluded that members of the distributing organization needed comprehensive instruction in sales and administrative methods. At the advice of an educational manager employed to meet the need, the company decided to hold classes for all members of the sales organization during one week each year in ten conveniently located cities.

TRAINING OF SALESMEN—*Class Instruction Based on Actual Problems.* An automobile manufacturing company which planned to hold classes to instruct members of its selling organization in sales and administrative methods decided to have the instruction based upon written reports of actual problems which dealers and distributors had faced. The company believed that the problem method would be more effective than the lecture method in stimulating the interest of class members.

(1924)

The Durco Motors Company manufactured high-grade automobiles, which it sold through distributors and dealers. The distributors were located in large cities and had exclusive selling rights in their territories. They sold at retail within a small radius of the cities in which they were located and at wholesale to dealers in other cities within their territories. By means of constant research during the years previous to 1924, the Durco Motors Company had brought its production and engineering standards to a high degree of development. The sales organization, however, had not been developed so satisfactorily. The company believed that the sales expense was too high in proportion to the expense of production. During 1923 and the first part of 1924, the sales research department of the Durco Motors Company had studied the sales methods used by the company's distributors and dealers and by their salesmen. This study convinced the executives that the members of the distributing organization needed comprehensive instruction in sales and administrative methods. The company, therefore, appointed an educational manager to devise a suitable program of instruction for assistant sales managers, salesmen, distributors, and dealers.

¹ Fictitious name used for purpose of disguise.

The sales research department had embodied the results of its study in a detailed report. The report summarized the findings of the department and stated the sales practices which the department desired to recommend. The report dealt with all the important phases of distributors' operations: used car practices, service policies, methods of securing prospective customers, filing systems for keeping names of prospects, routing of salesmen, choice and training of salesmen, display and sale of accessories, arrangement of showrooms, accounting, advertising, and other matters.

The factory sales force of the Durco Motors Company consisted of a sales manager, two assistant sales managers, and ten district sales managers. The district sales managers traveled continuously through their respective territories aiding the distributors and observing their activities.

The Durco Motors Company sold to approximately 125 distributors, allowing them a discount on each car purchased. The company set for each distributor an annual quota based upon an average of the previous three years' sales and modified by sales expectations for the coming year. If the distributor attained his quota, he received an additional discount on all the cars which he had purchased. The usual discounts obtained by distributors varied from 25% to 27% of the retail prices of the cars. Most of the distributors had been associated with the company for 10 years or more. Few distributors had discontinued their contracts with the company.

Each distributor maintained a retail salesroom and a sales force and employed one or more executives to visit the dealers in his territory. Those executives inspected the accounting methods of the dealers, the arrangement of their showrooms, the quality of their repair service to customers, and observed their general attitude towards prospective purchasers and towards the Durco Motors Company. The typical distributor's organization also included an office manager, a retail sales manager, and a maintenance and repair department manager. The company had devised standard accounting systems for distributors and dealers.

The Durco Motors Company's distributors sold to approximately 875 dealers, many of whom sold several makes of automobiles. Some of the dealers employed no salesmen but made all sales personally, the others employed from one to six salesmen. Most of the dealers maintained repair service, and the

largest ones employed repair department managers. A majority of the retail salesmen of the dealers and of the distributors received both salaries and commissions; a few received salaries only, and a few were paid commissions only. The total remuneration of the retail salesmen usually equaled about 5% of their annual sales. Although there were fewer changes among the retail sales force for Durco automobiles than among the retail sales forces of many other automobile companies, the Durco Motors Company desired a still lower rate of sales force turnover.

The Durco Motors Company published a house organ, which was distributed among the sales organization; sales department bulletins, which were sent to dealers and distributors; and a salesman's manual containing information about the Durco automobile. The educational manager was of the opinion that the sales organization paid little attention to printed matter of this type.

The educational manager decided, as a means of increasing the effectiveness of the selling organization, to hold classes for all members of the organization during six or seven consecutive days each year. The assistant sales managers and the district sales managers of the Durco Motors Company, the general managers, retail sales managers, and traveling executives of the distributors, and the dealers were to be instructed on all topics which the company believed to be important in connection with the work of selling and of supervising selling. Retail salesmen, maintenance executives, and office managers were to be instructed on topics applicable to their particular duties.

Assistants selected from the members of the company would aid the educational director in giving the instruction. Each instructor could teach a group of about 50 men at one time.

The classes could be held at the factory, at a number of central cities throughout the territory, or at the city of each distributor. The cost to the company would be less if all the instruction were given at the factory than it would if classes were held in various cities. The educational manager believed also that the centralized classes would be the more effective; on the other hand, the expenses of the distributors and dealers would be less if the classes were held at central cities or in the cities of distributors. The educational manager favored conducting the classes at 10 central cities.

The Durco Motors Company would expect every distributor

and every dealer, together with their executives and salesmen, to attend all class meetings. Pending sales would not be considered an adequate reason for non-attendance. All expenses of the trip to the school, wherever it might be located, were to be borne by the dealers and distributors. The educational manager believed that salesmen should be paid an average week's earnings during the week of instruction.

The sales research department proposed that instructors use its report as a text-book from which to lecture to the classes and as a background for class discussions. Another suggestion was that actual problems illustrating the subjects discussed in the report of the research department be collected and that the presentation and discussion of these problems take the place of the proposed lectures of instructors. If the problems were secured, the report might be used by classes wholly, in part, or not at all. Most of the men who would attend the classes were familiar with, and had been successful in, the automobile business. The teaching material, if it were to hold their interest, should be practical and not theoretical. The educational manager wanted to have the material presented in such a way as to stimulate the intellectual curiosity of those attending the classes and influence the executives to form the habit of analyzing their own problems. It was essential that the salesmen, the dealers, and the distributors recognize the value of the instruction and be willing to attend the classes.

The company decided to experiment with written problems as the basis for instruction. Dealers and distributors would be interviewed as to their methods of administration, and significant problems that they had solved or were attempting to solve would be recorded. Groups of dealers and distributors would discuss these problems under the guidance of the educational manager and his assistants. The series of problems were to illustrate the substance of the report of the sales research department. The discussion of the problems would be supplemented with lectures by the instructors.

COMMENTARY: The problem of the Durco Motors Company may be divided into two parts: first, was the offering of sales instruction to the existing distributing organization a practical plan; and second,

how could it be put into operation so as to give the most effective results?

The value of some sort of instruction is evident from the case, and the company was prepared to meet the necessary expense. The chief difficulty lay in interesting the dealers themselves, because the results would not be immediate; to interest the dealers, a carefully prepared program must be presented to them in advance. It seems to have been logical, furthermore, to include the entire sales organization, because, in spite of expense and administration difficulties, a uniform sales policy and efficient sales organization are only to be obtained by including all component parts of the sales organization.

The use of problems and specific situations arising in the experience of the men in the sales organization was admirably suited for this type of instruction, and more effective results could be expected from the use of such problems than from the use of lectures as a means of instruction. Discussion of actual situations promised not only to arouse interest, but also to draw forth discussion of specific instances in the experience of various members of the organization, and to result in interchange of ideas.

This method, furthermore, would place the distributors in an analytical frame of mind with respect to their own problems. The members of the sales organization might possibly be antagonized by the loss of time spent in listening to educational and morale-building talks on general sales methods, whereas intimate discussion of their actual sales problems might be expected to develop an attitude of diagnosis, useful in the solving of future problems.

Most effective results probably were to be obtained from holding the classes in eight or ten central cities. Although to bring the men direct to the factory would be less expensive to the company and would give the men an insight into the company's factory problems, the burden of traveling expenses upon the individuals would be prohibitive and it would be difficult to treat specialized district problems effectively. The distributors would suffer far less interruption of work and expense, were classes to be held in all the cities in which dealers were located, but that practice would increase the burden of expense to the company, and would limit the range of experiences which might be included in a gathering of larger scope. The plan of holding training classes in several central cities seems, therefore, to have been both expedient and practicable for the use of the Durco Motors Company. Following the course, some follow-up work probably would be necessary.

May, 1926

D. W. M.

TONASKET LUMBER COMPANY¹

MANUFACTURER—LUMBER

APPRECIATION—*Holding Timber Tract for.* Some of the executives of a lumber company which for 15 years had been holding a timber tract for appreciation contended that the company should cease purchasing logs in the open market, cut its own stumpage, and devote the capital thus released to the development of a profitable sales subsidiary which the company previously had organized. The company decided, however, to cut only enough timber to pay the carrying charges on the tract, and to hold the remainder until the world's supply had become further reduced.

(1924)

In 1909 the Tonasket Lumber Company purchased 500,000,000 feet of standing Douglas fir and hemlock. From 1909 to 1924, the company had not cut any of its stumpage but had purchased logs from other companies in the open market. The management had followed this policy in order to realize an appreciation upon the standing timber. On January 1, 1924, the executives met to fix the policies for the coming year. Several executives recommended that the company should commence cutting its own stumpage. Other executives made a counter suggestion to cut only enough stumpage to pay the carrying charges on the tract.

This company had been organized in 1904. It had owned a small tract, but had cut all the stumpage by 1909 and had sold the timber to wholesalers west of the Mississippi. In 1909, when the company had purchased the tract of 500,000,000 feet, it also had erected a sawmill of a capacity of 50,000,000 feet annually. Although this mill was on a river within a short towing distance of the tract, the company had used the mill only to cut purchased logs. From 1909 to 1924, the annual sales of the company had remained at 50,000,000 feet; it had exported 20% of this quantity.

In 1921 the Tonasket Lumber Company had formed a subsidiary sales organization to act as selling agent for the parent company and 20 other lumber companies. The sales of the subsidiary, exclusive of sales for the parent company, had been 30,000,000 feet in 1921, 75,000,000 feet in 1922, and 150,000,000 feet in 1923.

¹ Fictitious name used for purpose of disguise.

The commission profits from these operations were excellent; the subsidiary had established a nation-wide market with a branch on each coast, and the increase in sales had required only a small increase in expenses. The sales organization had made sales to wholesalers except at the two branch points, where it made sales directly to consumers.

Until January, 1924, all the executives had agreed that the company should make no cut in the large tract until logs became scarce. The stumpage had increased in value during the 15 years from 1909 to 1924, but taxes had increased in greater proportion. Taxes in 1909 had been \$4,500; in 1923 they had been \$18,000. The market value of the stumpage in 1909 had been \$1.50 per 1,000 feet; and in 1923 \$5 per 1,000 feet. There were evidences that subsequent appreciation would be at approximately the same rate.

In 1917 the company had required \$500,000; it has obtained this amount by selling 6% mortgage bonds secured by the tract. In 1920, 1921, 1922, and 1923, the company had retired \$50,000 of bonds each year. In January, 1924, the cash position of the company was such that it could retire the remainder of the issue if it so desired.

Either of the suggested plans for using the stumpage required the erection of a logging camp. The cost of a camp and its machinery and railroad equipment would be approximately \$200,000. The company could invest this amount, since it had a substantial surplus. In 1923 the company's rate of profit on purchased logs had been about the same as it had been in 1909, and there was no evidence of shortage of the company's raw material in the open market.

The Tonasket Lumber Company contemplated no expansion of its sawmill. The executives did not expect that conditions in the industry would be so favorable as they had been in the preceding three years. Since the market was oversupplied, lumber producers' profits probably would be reduced. The management estimated, however, that the Tonasket Lumber Company's production costs were lower than those of most of its competitors because of its modern equipment and the favorable location of its sawmill. A majority of the company's competitors were cutting from their own stumpage a portion of the logs which they required. If the Tonasket Lumber Company ceased purchasing

raw materials and logged sufficient timber to meet all its requirements, its stumpage would last 10 years. At the expiration of that time, it probably would be advisable for the company to purchase more stumpage or to concentrate attention on the sales subsidiary. There was little probability that any of the companies for which the subsidiary acted as agent would change their method of distribution.

Executives who believed that the company should log its own stumpage contended that the company could use the released capital profitably in developing the sales subsidiary. This business, furthermore, was less hazardous than that of maintaining timber tracts, because there was a continual fire hazard on the standing trees. Because of the location of the company's tract, the fire hazard on it was not so great as that on many forests. Nevertheless, the cost of fire insurance was prohibitive, and the company never had carried it. If the company decided to obtain the necessary logs from its own tract, it would save from \$1.50 to \$2 per 1,000 feet, the amount of gross margin usually made by the logging companies from which the Tonasket Lumber Company purchased its raw material.

Several executives believed, however, that the time had not come for the company to obtain all its logs from its stumpage and that it should cut only enough timber to meet the carrying charges on the tract, which for 1924 would be as follows:

Taxes	\$18,000
Bond interest	18,000
Serial retirement of bonds	<u>50,000</u>
	\$86,000

These executives estimated that an annual cut of approximately 12,000,000 feet would be sufficient to meet fixed charges, since the company could net from \$6 to \$7.50 per 1,000 feet on its own timber.

The Tonasket Lumber Company decided to adopt this policy and to leave standing a substantial proportion of the timber until the world's supply had become further reduced than it was in 1924.

COMMENTARY: This case involves certain economic considerations which arise out of the nature of lumbering operations. No balance

sheet of the company is given and the company's financial situation, which might disclose considerations of an impelling nature, is not presented.

Standing timber is a natural resource which—in the absence of scientific reforestation—tends steadily to disappear, as cutting operations are maintained. The *supply* of lumber thus tends to decline, whereas the *demand* for lumber tends to increase with the steady growth in population and wealth. Solution of the particular problem here presented depends, therefore, upon a decision as to whether the future increment in the value of the timber will give a better “long-run” profit than the beginning and maintenance of cutting operations. This decision necessarily involves a forecast of lumber prices during the probable life of the tract under the alternative proposals.

May, 1926

H. B. V.

PHIPPS HOSIERY COMPANY¹

MANUFACTURER—HOSIERY

STOCK CONTROL—*Use of Sales Records by Manufacturer in Production of Style Merchandise.* A company which had manufactured durable, low-price hosiery exclusively, sold chiefly to wholesalers, and maintained stocks only in the grey, began to sell hosiery on a style basis direct to department stores in 1922. This change in policy made stocks of finished goods essential. Because of frequent changes in colors and styles of hosiery popularly demanded, the company found it difficult to maintain finished stocks which were adequate but not excessive. The company's existing sales records were not designed to control finished stocks of goods subject to frequent style changes, and the company's problem was to establish a system of records adapted to this purpose.

STYLE MERCHANDISE—*Direct Sale to Retailers by Manufacturer.* In 1922 a company which had manufactured durable, low-price hosiery exclusively began to manufacture hosiery for sale on a style basis. Prior to 1922, the company had sold chiefly to wholesalers and had maintained stocks in the grey only. The company decided to sell the style hosiery direct to department stores. Immediately, the company found it necessary to maintain stocks of finished goods; style changes were frequent and department stores demanded prompt delivery.

(1923)

Prior to 1922, the Phipps Hosiery Company had manufactured durable, low-price hosiery for men, women, and children. This hosiery the company had sold under the Phipps brand through-

¹ Fictitious name used for purpose of disguise.

out the United States. Most of the sales had been to 250 wholesalers, whose average yearly purchases from the company amounted to approximately \$10,000 each.

During the decade from 1912 to 1922 the importance of style as a consumers' buying motive affecting hosiery purchases constantly had increased. This had led the executives of the Phipps Hosiery Company, in 1922, to decide to manufacture a more stylish type of woolen and silk hosiery to retail at \$1 a pair and to be sold in attractive packages and under a new brand, Monarch Phipps. The increased importance which consumers attached to the style of hosiery had served to enlarge the volume of hosiery purchases at department stores. The hosiery sales of many department stores were so large that the stores were able to purchase at wholesale prices direct from manufacturers. The executives of the Phipps Hosiery Company had decided to increase gradually the sales force and to sell Monarch Phipps hosiery direct to department stores and large retail specialty stores in shopping centers of the United States.

This policy immediately had made it necessary for the company to maintain what was called a "service stock department." Since orders from wholesalers usually were received from one to two months before the specified delivery date, shipments to wholesalers were not made from finished stocks as a rule. Prior to the change in policy, therefore, stocks had been maintained mostly in the grey in order to avoid losses resulting from changes in the colors demanded by consumers. When orders were received from wholesalers, the requisite quantity of stock was taken from the grey and dyed. Retailers, on the other hand, ordered in relatively small quantities and with comparative frequency, even though their aggregate annual sales were large. Retailers usually requested more prompt delivery than was required by wholesalers. Furthermore, retailers frequently required fill-in orders for delivery within two or three days, especially at times of uncertainty as to the probable popularity of various colors. Thus, the service stock department had been established by the Phipps Hosiery Company to furnish prompt shipments to retailers. At first, about 22,500 dozen pairs of hosiery in finished form were carried in stock. The number later was increased to 30,000 dozen. The company expected that when the policy of selling direct to retailers had been developed further, a much

larger stock would be necessary. Intimate control of this service stock was essential if satisfactory service was to be maintained and losses from obsolete inventories were to be avoided; therefore, early in 1923, the company decided to organize its current sales data with that purpose in view.

Under its former policy of selling nothing but staple goods and to wholesalers only, the company had maintained the following records: Orders received were entered chronologically in an order-book. This record showed the customer's name and address, the number of dozens of each style, color, and size of hosiery ordered, the specified date of delivery, and the method of shipment. The total value of orders was summarized for each salesman monthly, but no other monthly summaries of these data were prepared currently because the order-book information was in such detailed form that the compilation of summaries was difficult and expensive. Furthermore, the president of the company was of the opinion that it was less expensive to compile specific sales information from time to time as circumstances required than to maintain several summaries which might be needed only infrequently.

Annual summaries of orders by dozens and by value were compiled for each style and color. Early in 1920, before the introduction of style products, orders received were summarized monthly and classified by styles and colors, for the purpose of showing the trends of popular demand. It was decided, however, that the value derived from these data was not commensurate with the labor involved; hence, the compilations were discontinued after a brief trial. At that time, the executives designated as a separate style each type of hosiery which differed in any detail of construction from the other types. Stockings of several weights and colors were made of each material. For example, it was considered necessary to have three or four weights of mercerized stockings in order to meet the price demands of the trade.

Invoices to all customers were summarized monthly by the accounting department to show the total quantity and value of hosiery billed. This summary had limited usefulness as a record to control stocks in anticipation of demand, since the volume of invoices measured the attempts of the company to meet demand, rather than the demand itself, and since the summary did not show billings by style or color. Furthermore, timeliness was an

important element in information used as a basis for gaging demand. The company customarily did not fill orders from wholesalers until from two weeks to two months after the orders were received, and, although the service stocks reduced this delay in the case of retail customers, some lag always would exist between receipts of orders and dates of billings.

A monthly summary of the number of cases shipped was used as a rough gage of sales in physical units, but the usefulness of this measure was lessened by the fact that all cases were not of the same size. A standard case contained 60 dozen pairs of stockings, but cases which contained 30, 70, 80, and 100 dozen pairs also were used. The proportion which shipments of cases of any one size bore to total shipments varied with trade conditions. There was a tendency for small cases to predominate when business was dull, and for large ones to be more common in periods of activity.

The foregoing data were recorded at the direction of the sales department. The production department recorded the number of dozens of each style invoiced monthly. No distinction by colors was made. The only point at which sales in physical units could be classified by colors was in the records of the dye-house. There the number of dozens of each style dyed was summarized monthly according to colors.

The company recognized the inadequacy of existing sales records. No method was provided for determining current demand by styles or by colors and much of the information recorded was not sufficiently timely to be of great use in controlling production or stocks in the service stock department. The company desired to establish an adequate system of sales records and to test the usefulness of the records before the time when the greater proportion of the company's sales would be made direct to retailers.

COMMENTARY: The objective sought in this case was the analysis of current sales data to assist in the control of finished stocks of style goods.

The company formerly had produced and sold chiefly to wholesalers durable low-priced hosiery for men and women, but subsequently it had changed its product to style goods and had changed its method of distribution to include sales direct to retailers. Under the former policy of selling to wholesalers who bought sufficiently far in advance of deliv-

eries to permit finishing to order, stocks had been kept in the grey. Since, however, retailers bought in small quantities for immediate shipment, it was necessary, after the change in policy, to carry stocks of finished goods. Because they were style goods, it became necessary to establish a sensitive method of control of these service stocks to provide a sufficient supply and to avoid loss from obsolescence.

The statistical problems were the selection of suitable data and the formulation of a routine method of compilation to provide adequate and timely information.

The crux of this problem was the fact that the goods possessed "style" qualities. The very purpose of style is to create new demand; hence, if the merchandising of style goods is to be an effective policy, there must be continuous recurrence of new styles. A situation which involves reliance upon style appeal, therefore, presents a most insistent requirement for sensitive measurement of demand because, to take advantage of the rapid growth in popularity of any new style, there must be sufficient goods on hand, and conversely, to avoid heavy losses through obsolescence, the accumulation of stocks must be avoided.

Style as style is meaningless and cannot be measured or controlled. Style may be analyzed, however, into its physical characteristics, each of which can be studied in relation to the demand for goods. The first step in the analysis is the examination of the elements of style to determine those which require control. There were: (1) material, that is, cotton, mercerized cotton, silk, wool, and combinations thereof; (2) pattern or weave; (3) weight of yarn; and (4) color. The case does not state which of these was considered dominant, but the implication is that color was to receive immediate attention. Color will be assumed, therefore, as the commanding factor to be controlled, but the principles applicable thereto are broad and will apply to any or all of the other elements. In fact, the method adopted for control should be one which would permit the shift of emphasis from one element to another, to provide for flexibility and to accommodate any style element as it might become dominant.

Since the stock was large in value, and since the style element was extremely sensitive, timeliness of data to disclose trends of the dominant style factor, such as color, was most important. Timeliness involved two concepts: (1) the earliest point, in the flow of information through the office, at which the necessary data could be obtained; and (2) the frequency with which figures should be compiled.

Study of the various records shows that orders received were not only the earliest point at which the necessary information could be obtained, but also were the only place where full information for all style elements was available. The complete specifications contained

upon orders received by the company would indicate the nature of the demand of the company's customers. Orders received, therefore, should be the data from which to obtain desired and necessary information.

Frequency of compilation would depend upon the conditions surrounding each style element. Speaking generally, this frequency should vary directly with the risk involved. That is, the greater the risk in any one product because of the sensitiveness of the style element involved and the money value of the stock required, the more frequently should information be compiled. Thus, there would be different frequencies for products containing different style elements. It might be necessary to make compilations for some products every day, whereas those for other products need be made only once a week or perhaps once a month. This would be a matter for the judgment of executives who were familiar with the speed with which demand for the several style factors changes.

In such compilations, it would be unnecessary to include all sales in detail. The products could be classified according to style elements. Some of the major items of extreme style goods which were in popular demand at the time should be shown separately; goods of more stable style and those with a small volume of sales could be grouped into convenient classes. Upon this basis, the sales of each item or each class could be compiled as frequently as desired. Care would have to be exercised, of course, in the selection of those items which should be shown separately, because early demand for them usually would be satisfied with sales of small volume, and hence they would be included in their classes; but when they became sufficiently important, they would have to be removed from their classes and set up as separate data. This would require continuous study upon the part of a responsible executive, because the care with which these data were compiled would be the controlling factor in the usefulness of the information. It would be worth the necessary clerical expense to have this work performed continuously by routine process.

The sales figures would show the current movement of goods from stock; these figures should be studied for significant current trends. Knowledge of the present rate of flow, modified by the current trend of styles and considered in conjunction with the time required for manufacturing economical lots, would permit the establishment of minimum stock limits and standard manufacturing orders so that the actual replenishment of stock could proceed by routine methods. The whole purpose of obtaining this information would be to facilitate the determination of suitable and effective limits, so care would have to be exercised that these be revised from time to time to meet changing demands as shown by the figures compiled.

It would be necessary, in studying trends, to avoid being misled by the sales of a few successive weeks which might be large or small by accident. A more reliable appraisal of trend could be obtained by computing moving averages over several weeks in order to smooth out the accidental fluctuations. The lengths of the periods included in these averages would depend upon the expected rapidity of style changes and the observed irregularities in the flow of sales. These would be matters of judgment by those familiar with conditions. The moving average method should be applied only to those products whose movements were of commanding importance at the time; the movements of groups could be gaged by current figures, because accidental fluctuations in individual products would become submerged in the group totals.

Regardless of the value of routine figures, however, nothing could take the place of continuous careful scrutiny, by a responsible officer, of daily stocks and daily sales. The figures merely would constitute an aid to his judgment and could not in any sense supplant it. It would be fatal to assume that any statistical method could be established which would serve automatically to control stocks and which would avoid the necessity or the continuous exercise of care.

The opinion of the president, that it was less expensive to compile specific sales information from time to time as circumstances required than to maintain several different summaries which might be needed only infrequently, was based upon failure to analyze the requirements as to control data. All summaries which must be at hand immediately when needed should be maintained currently; those which may not be needed for immediate reference may be compiled only as required. Thus, it becomes a matter of analyzing operating requirements to determine what summaries are necessary for current control. Since all clerical work costs money, it is a question in each instance of weighing immediate usefulness against cost, but these facts should be determined by a careful planning of the kind of control to be used, so that figures which are believed to be necessary will be maintained currently for immediate use.

April, 1926

A. J. H., JR.
C. B. P.

GEORGE FROST COMPANY

MANUFACTURER—GARTERS AND HOSE SUPPORTERS

STYLE MERCHANDISE—*Export Sales Policy Influenced by Style Changes.* A company which manufactured garters and hose supporters received through its Colombian agent a number of indents calling for items

which had been discontinued because the styles in question had been replaced by new ones. The company still had small stocks of the old styles, but it was contrary to its policy to fill foreign orders from stock. Since the company's products were increasingly subject to style influence so that a similar situation was likely to occur in many other foreign markets, the company wished to establish a sound precedent, and decided to fill the orders by substituting the new styles, and at the same time to write explanatory letters to the dealers who had placed the indents.

(1925)

The George Frost Company received from Colombia a number of orders for items which had been discontinued and replaced by new styles. It considered various methods of meeting the situation with a view to establishing, if possible, a general policy in the sale of its products as style goods in foreign countries.

The George Frost Company manufactured garters and hose supporters for men and women under the trade names of *Boston Garters* and *Velvet Grip Hose Supporters*. The factory and offices of the company, which was one of the largest of its kind in the United States, were located at Boston, Massachusetts. Its primary interest was the development of domestic sales; it had no export department. Under the supervision of the general sales manager, however, sales had been developed in a number of foreign markets, principally the United Kingdom, Cuba, Argentina, and other parts of Latin-America, and in December, 1925, indications were that export sales for the year 1925 would show a substantial increase in volume.

The garters produced by the company were manufactured from special webbings made in accordance with the company's own specifications by arrangement with textile mills in southern New England. The mills kept a number of looms working constantly on webbing for this company. Under existing methods of operation, the minimum economical performance of one loom on a given adjustment was 10 weeks, which represented a quantity of webbing sufficient for from 150 to 250 gross of garters, depending principally upon the width of the webbing. This meant that the company's costs decreased as the looms operated beyond 10 weeks without resetting, but that no operation of less than that time could be performed without a heavy increase in the cost of the webbing.

Prior to 1921, garters were made only in solid colors such as

blue, pink, tan, and green. For the most part these colors were standard, although occasionally a new color was added or an old one withdrawn. There were other variations, such as those relating to the width of the webbing, and the number of clasps. With these few exceptions, garters were uniform products and the company's entire line at a time included only 15 or 20 items. By 1922 the style element had begun to appear in the garter industry in response to the introduction of garters with varicolored stripes by one of the leading manufacturers. This style influence increased rapidly. New styles were created and old ones discarded at increasingly swift intervals, and by the end of 1925, to meet competition the line of the George Frost Company had increased to an average of 75 items.

New styles consisted usually of new colors or new combinations of colors worked into the webbing as stripes. Sometimes these colors were chance combinations, and again they had a definite meaning as in the case of college or fraternity colors. Styles ordinarily were originated at the mill which produced the webbing, in which technical men constantly were working on such problems, although occasionally manufacturers created their own styles.

As rapidly as new styles were added, samples of such as were deemed suitable for the particular country were sent to the company's foreign selling agents. This practice did not extend to the United Kingdom or Europe because the company had exclusive selling arrangements in that territory with a London wholesale merchant, by the terms of which garters were assembled in London. Since the webbing could be obtained to better advantage from English mills, only the metal parts were supplied by the company from the United States. Up to the end of 1925, the style influence in garters had not reached England and the garters assembled in London continued to be made from conservative English webbings.

In other foreign markets where sales were being made, the company usually was represented by a selling agent who worked on a commission basis. Sometimes, as in Cuba, the agent did not carry stocks or order for his own account, but simply booked indents from wholesale and retail merchants. Again, as in Argentina, the agent ordered for his own account, and distributed to merchants from his own stocks. In the northern part of South America, the company had concluded arrangements in 1924 with

a selling agent who spent about half his time in Colombia and in Venezuela and the rest of his time in the United States, where he also had business interests. When in South America, this agent traveled constantly between the principal towns and cities of Venezuela and Colombia and booked indents from the responsible wholesalers and retailers in those countries. The agent was paid a commission on all the company's sales to the two countries.

In early 1924, the George Frost Company put on the market four new designs of a type known as high-color styles. The designs were similar but the color combinations were varied. It was expected that these styles, which were extremely striking, would have considerable vogue in the United States. The mill from which the company secured this webbing set looms for each pattern. Samples of the four new styles were sent to the company's foreign selling agents.

Sales of the four high-color styles continued satisfactorily in the United States for a little more than a year and a half, and then began to decline. At about the same time corresponding drops in the sales of these styles occurred in Cuba and in Argentina. The company concluded, therefore, that these styles should be withdrawn, and the manufacture of the webbing accordingly was stopped. The manufacture of webbing and garters always was somewhat in excess of the immediate sales requirements, so that stocks of assembled garters constantly were maintained at the company's plant ready for distribution on receipt of orders. The policy was to carry stock sufficient for only a few months, although stocks for domestic sale could be carried much longer and still be in an entirely salable condition. Foreign orders, however, never were filled from these stocks. Although the company was convinced that, in spite of unfavorable climatic conditions in many countries, garters shipped from stock would be in a satisfactory condition for a year after shipment, nevertheless, as a matter of policy, the company considered that it was advisable to make up such orders from entirely fresh material in order to obviate any possibility of dissatisfaction that could be attributed to the age of the merchandise.

When the manufacture of the four high-color styles was discontinued, the company still had a sufficient stock of these garters assembled to fill probable domestic orders for the next six

months. At the current rate of decline it was estimated that the demand for these styles would have ceased entirely by that time. When the decision to discontinue the four items was made, they were replaced by four new styles. The new styles were made from webbing similar in texture and in width but radically different in appearance, because of differing color combinations.

Shortly after the discontinuance of the four styles in question, total orders amounting to 12 gross were received from the company's selling agent in Colombia. Nearly all these called for one or another of the four high-color styles. There were several probable reasons for the inclusion of these particular items in Colombian orders at a time when the demand for them was declining in other markets. The most obvious reason was that the inaccessibility of Bogota, the capital city of Colombia, delayed the receipt of samples by the agent until a considerable time after the samples had been received by other foreign agents. A second reason was that instead of being able to remain in one city, as was the case with most of the other foreign agents, the Colombian agent was obliged to travel constantly. Bogota was isolated and was not a distributing center for the rest of Colombia. Medellin and Barranquilla were equally important, and, in addition, the agent covered Venezuela, which necessitated trips to Caracas. Since distances were considerable and means of transportation poor, it consequently was often six months or more after receipt of the samples before the Colombian agent had an opportunity to display them to dealers throughout his territory.

The company considered the problem raised by the receipt of these orders a vital one. Colombia was a comparatively new territory to the company and it was desirous of filling all orders satisfactorily. At the same time it realized that, although this particular situation had arisen for the first time in the case of Colombia, the situation was one which was quite likely to occur not only again in Colombia but in any other foreign markets in which distance or other factors retarded the introduction of new styles.

The company did not consider that the selling methods used in Colombia and Venezuela affected the situation at all. The problem was the effect of style changes on foreign sales, and the company was of the opinion that the problem was a general one

quite independent of the particular selling methods adopted in any given market, although influenced by geographical or other considerations that affected the time necessary to receive and display samples.

There were at least four possible courses of action. In the first place, the company could fill the Colombian orders from existing stocks of the four high-color designs. These stocks were less than three months old, and the company believed that without doubt the garters supplied in this way would be quite satisfactory even under the tropical conditions existing in Colombia. On the other hand, such orders could be filled only once in this way, for the stocks constantly were decreasing and no additions were being made. Furthermore, such a course was a violation of the well-settled policy of never filling foreign orders from stock.

In the second place, the company could arrange with its mill to produce more of the webbing required. This would mean either that all four of the designs could be produced or that only one could be produced and all orders filled from the one design. In any case, the operation could result only in a loss because of the relatively high cost of producing small quantities, and the company hesitated to establish such a precedent. A third possibility was to write individually to the dealers from whom orders had been booked to explain the situation fully not only in regard to the present instance but in regard to the general practice of withdrawing old styles and establishing new ones. The permission of each dealer then could be requested to substitute the new styles on the present orders. The difficulty with such a course was that the dealers presumably placed orders for garters which they required at once. At least two months' time would be lost because of such correspondence and still more months would elapse before the final permission could be secured to ship the substitute garters and before the garters finally could be received by the dealers. Even though the situation were fully understood, therefore, there was bound to be considerable dissatisfaction from such a course.

The fourth possibility was to substitute the new style garters without asking for direct permission and to send the explanatory letters at the same time, trusting that the dealers would understand the situation and would be willing to accept the substitution. The danger here was that in case the dealers did not like

the new styles, the company would find itself in the position of having sent shipments which were unauthorized, the return of which it would have to stand ready to accept.

In considering these various possibilities, the company was faced with the task of adopting the one which not only would meet the present case to the best advantage but also would establish a sound precedent for future practice. It decided, therefore, to substitute four new styles on the Colombia orders and at the same time to write letters explaining the situation from the style point of view and asking the dealers to authorize the company in the future to make such substitutions where styles ordered had been discontinued. The company believed that, if the style influence was to continue not only domestically but in foreign markets, the only way in which foreign orders could be handled satisfactorily was by obtaining such authority.

COMMENTARY: The problem raised in this case is one likely to be met by any manufacturer of style goods who is selling his products in foreign countries. What policy should be adopted in handling foreign orders that call for styles discontinued and replaced by new ones? This is a variation of numerous allied problems familiar in the domestic field. The extension of style influence to a varied list of products, notably in men's wearing apparel, not formerly considered style goods, has seemed to be a peculiarly American development and has brought with it a train of incidental problems, conspicuously those connected with the style lag. But these problems concern the manufacturer less than the purchaser. If style influence radiates from a given center, like the ripples from a stone thrown in a pool, buyers at varying distances from the center must watch the passage of the style wave. This is a well-understood phenomenon and buyers must not purchase prematurely nor, on the other hand, overstay the market.

In the more accessible and more advanced foreign markets the course of a given style can be expected to coincide fairly closely with that in the United States. This was true in the present case, for instance, in Cuba and in Argentina. For geographical and other reasons, however, there are markets where the introduction of styles is necessarily delayed, and it is there that this exporting problem becomes important. Presumably it varies with the appeal of the particular product and with the rapidity of the style turnover.

In the present case the George Frost Company decided to substitute new styles where the orders called for discontinued ones and at the same time to write explanatory letters to the purchasers. This

solution of the problem appears to be satisfactory. It is fair to assume that the style influence is one which is likely to continue. It is equally indisputable that there always will be markets where it is impossible to establish styles fully before the major demand will have ceased in the original markets. Under such circumstances by far the best policy seems to be to educate the buyers in such markets to the exigencies of style changes and replacement. Eventually it may be possible for many manufacturers to link up a number of such markets in such a way as to continue economical production for them specifically on lines discontinued elsewhere; but, under the circumstances given, the George Frost Company made a well-grounded decision.

January, 1926

P. W. T.

HONEY COMPANY¹

MANUFACTURER—PURCHASING LIQUID CHLORINE

PURCHASING—*Refusal to Buy Essential Supply from Company with Inadequate Capitalization.* A company manufacturing cotton goods decided to continue to purchase liquid chlorine, an essential supply, from its two customary suppliers although another company offered the product at a lower price and could give more rapid delivery. The cotton manufacturing company was convinced that the quality of the latter company's product would be satisfactory, but believed that the capitalization of that company was too small to permit of sufficient investment in high-grade containers for the product, a factor of importance in this connection.

TRANSPORTATION—*Freight Train Delivery Preferred to Motor Truck.* A company offered to deliver liquid chlorine to a cotton goods manufacturer by motor truck. Although truck delivery would be more rapid than delivery by freight, the cotton manufacturing company insisted upon freight delivery, believing that delivery by truck was uncertain because of road conditions.

(1924)

The Honey Company, which manufactured cotton goods, operated a bleaching and dyeing plant in Philadelphia. The company used about 200,000 pounds of liquid chlorine annually. Liquid chlorine was an essential supply. Without it the bleaching plant could not operate. For four years prior to 1924, the Honey Company had purchased this item from the Ramsay Chemical Company¹ and the Manelli Pulp & Paper Company.¹ Each of these companies had a production capacity and a quan-

¹ Fictitious name used for purpose of disguise.

tity of containers sufficient to supply the total requirements of the Hoxey Company. That company always had maintained two sources of supply in order to protect itself in case of the inability of either supplier to fulfil its contract. Liquid chlorine was manufactured as a by-product by the Manelli Pulp & Paper Company, and, consequently, that company's production of the item varied with its production of paper. The prices of the Manelli Pulp & Paper Company frequently had been lower than those of the Ramsay Chemical Company.

In the spring of 1924 the purchasing agent of the Hoxey Company was offered liquid chlorine by a representative of the Darnell Company.² This company acted as selling agent for the Ardery Company,² a small manufacturer of liquid chlorine. The representative of the Darnell Company offered to supply liquid chlorine at a lower price than that quoted by either of the previous suppliers.

The Ramsay Chemical Company was located about 400 miles from the Hoxey Company's mills. Its quoted price in the spring of 1924 was \$5.35 per 100 pounds delivered. The Manelli Pulp & Paper Company was located about 100 miles from the Hoxey Company's mills. Its quoted price was the same as that of the Ramsay Chemical Company, \$5.35 per 100 pounds delivered. The Ardery Company was located about 75 miles from the mills of the Hoxey Company. The price quoted by the representative of the Darnell Company was \$5.25 per 100 pounds delivered.

The quality of the liquid chlorine supplied by the Ramsay Chemical Company and the Manelli Pulp & Paper Company always had been satisfactory, but the purchasing agent had no reason to believe that the quality of the Ardery Company's products would be less satisfactory. For several years prior to 1924, he had purchased chemicals from the Darnell Company and had found its service and the quality of its products satisfactory.

Next to the quality of the product, the most important consideration in the purchase of liquid chlorine was the quality and quantity of containers owned by the manufacturer. Liquid chlorine was shipped in iron cylinders of 100 pounds capacity. Each of these cylinders cost \$20, and a purchaser was charged that amount for each cylinder shipped to him and credited with that amount for each cylinder returned. Rental of 50 cents a

² Fictitious name used for purpose of disguise.

month was charged for a cylinder kept by the purchaser longer than 90 days.

If the containers were not perfect, there was a possibility of leakage, which not only involved waste but endangered the health of employees. The use of cylinders which were not standard in size forced the company to make changes in pipe lines, with consequent possibility of leakage.

The Hoxey Company maintained a stock of 200 cylinders of liquid chlorine, or 5 weeks' supply. The manufacturers supplying the Hoxey Company with liquid chlorine had found it necessary to devote a total of 400 cylinders to that company's use at all times. The Ramsay Chemical Company, which was one of the oldest manufacturers of liquid chlorine in the eastern part of the United States, had developed standard containers which were of slightly better quality than those of its competitors. It also maintained a better inspection service for returned cylinders. For these reasons, the purchasing agent of the Hoxey Company believed the Ramsay Chemical Company to be the most reliable source of supply available. The Hoxey Company had experienced some difficulty in previous years with the containers of the Manelli Pulp & Paper Company, but that difficulty had been eliminated.

The Ramsay Chemical Company and the Manelli Pulp & Paper Company each had a capital rating of more than \$1,000,000 and an excellent credit rating. The Ardery Company's rating was: capital \$100,000, credit good. The purchasing agent of the Hoxey Company estimated that the Ardery Company, with that amount of capital, probably owned less than 1,000 cylinders.

Shipments from the Ramsay Chemical Company to the Hoxey Company required five days, and shipments from the Manelli Pulp & Paper Company, two days. The representative of the Darnell Company said that delivery from the Ardery Company could be made in one day by trucks owned by that company. He stated that the Ardery Company would make delivery by truck and also return the empty cylinders by truck. Shipment by freight from the plant of the Ardery Company to the Hoxey Company would take two days. Although delivery by truck was quicker than delivery by freight, it was less certain. During the winter the roads might become impassable. It was impossible to purchase more than a few cylinders of liquid chlorine on

the spot market. Although the purchasing agent knew that all sales of the Ardery Company prior to 1924 had been delivered by truck, he requested freight shipments in carload lots. The representative of the Darnell Company stated that truck shipments allowed the Ardery Company to operate on a small capital investment in cylinders and to quote a lower price than competitors. He stated, furthermore, that in order to fill the Hoxey Company's requirements in carload quantities, the Ardery Company would have to purchase 500 additional cylinders.

The purchasing agent of the Hoxey Company decided to award the contracts for the 1924 requirements of liquid chlorine to the Ramsay Chemical Company and the Manelli Pulp & Paper Company, dividing purchases equally between them.

COMMENTARY: The decision of the Hoxey Company not to buy from the Ardery Company recognized the importance of containers as a factor in the purchase of liquid chlorine. Other factors equal, orders would be placed with the supplier offering the most satisfactory service in containers.

Had the Ardery Company clearly been able to maintain satisfactory containers, there would have been good reasons for placing with that company an order for a part of the Hoxey Company's requirements. The reduction in price was slight but would have constituted a saving. The quality of the company's chlorine was believed to be satisfactory. The new source might have become a more reliable source of supply than the Manelli Pulp & Paper Company, which manufactured chlorine as a by-product. Truck delivery was more rapid than freight, and would have permitted the Hoxey Company to carry smaller inventories. Decreased stocks would have lowered the risk of leaky containers, and reduced storage costs and the investment in inventory. Emergency deliveries could have been secured in less time. The wisdom of selecting the Ramsay Chemical Company and the Manelli Pulp & Paper Company as sources of supply depended, therefore, upon whether the Ardery Company could provide adequate containers.

The advantages to be secured in purchasing from the Ardery Company apparently warranted a more careful analysis of its capacity to render satisfactory service. An estimate of the capital investment in containers based upon the company's capitalization does not seem sufficient evidence upon which to base a refusal to buy. A rapid turnover of containers does not necessarily indicate non-standard or poor containers. A careful inspection service with close attention to replacement would be more effective when containers were returned to the

manufacturer at more frequent intervals. The possibility of damage to containers would be no greater with delivery by truck. In the event that truck delivery was impossible at certain times in the winter, the Ardery Company, nevertheless, would have been able to maintain as prompt railroad delivery as could the other sources.

Inasmuch as the liquid chlorine was an essential supply and purchases necessarily were split among two or more sources, the decision in this case might well have been to place a part of the company's business with the Ardery Company.

May, 1926

H. H. T.

OZARK PIPE LINE CORPORATION VERSUS MONIER ET AL.¹

INTERSTATE COMMERCE—*State Taxation on Pipe Lines Extending Beyond State, Unconstitutional*. The Ozark Pipe Line Corporation had incorporated in Maryland, and its main office was in Missouri. It owned and operated a pipe line, which passed through Missouri, but it did not receive or deliver any oil in the state. The company had obtained a license under which it could exercise the power of eminent domain and the authority from the state of Missouri to engage in this business. Later the state attempted to collect an annual franchise tax. The Supreme Court of the United States ruled, however, that the action of the state was unconstitutional because it was attempting to tax interstate commerce.²

(1924)

Mr. Justice SUTHERLAND delivered the opinion of the court:

Appellant is a Maryland corporation. It owns and operates a pipe line, extending from within Oklahoma, through Missouri, to a point in Illinois, together with certain gathering lines in Oklahoma. Through this line crude petroleum is conducted to Illinois and there delivered. Oil is neither received nor delivered in the state of Missouri. Since it began operations appellant has been assessed and has paid general property tax upon that portion of its line, and upon its other assets, in Missouri. It maintains its principal office in Missouri, where it keeps its books and bank accounts, and from which it pays its employees within and without the state, purchases supplies, employs labor, maintains telephone and telegraph lines, enters into contracts for transportation of crude oil, and carries on various other activities connected with and in furtherance of its pipe line operations. Along the pipe line in Missouri there are three pumping stations, the sole use of which is to accelerate the passage of the oil through the line. It owns and

¹ Supreme Court of the United States. Argued November 26, 1924. Decided January 12, 1925. 45 Sup. Ct. 184.

² Headnote by Harvard Graduate School of Business Administration.

operates passenger and truck automobiles, but these as well as its other property in Missouri are used exclusively in the prosecution of its interstate business. In compliance with the laws of Missouri applicable to corporations formed in other states desirous of transacting business in Missouri, appellant filed with the secretary of state its articles of incorporation, and amended articles showing an increase in its capital stock, paid license taxes aggregating \$6,401.50, and obtained a license and authority to engage "exclusively in the business of transporting crude petroleum by pipe line." It thereby acquired the right of eminent domain under the laws of the state.

The controversy arises over an attempt on the part of the state authorities to collect from appellant an annual franchise tax under sections 9836-9848, pp. 3015-3020, Rev. Stats. Mo. 1919. The statute requires every corporation not organized under the laws of Missouri, but engaged in business therein, to pay an annual franchise tax equal to 1/10 of 1% of the par value of its capital stock and surplus employed in business in the state. For the purpose of the tax the corporation is deemed to have employed in the state "that proportion of its entire capital stock and surplus that its property and assets in this state bears to all its property and assets wherever located." The corporation is required to make an annual report in writing to the state tax commission in such form as may be prescribed, giving the amount of its authorized and subscribed capital stock, the par value and market value thereof, and other specified information, as a basis, with other things, for the computation of the tax. Appellant, having failed to furnish this report, was threatened by appellees with an action in the name of the state to revoke its license, and with such proceedings as would cause the amount of the tax, together with penalties, damages, and interest, to become a lien upon its property and thereby create a serious cloud upon the title thereto. Upon these facts suit was brought to enjoin appellees from going forward with such action and proceedings, upon the ground that the statute as applied to appellant, contravenes the commerce clause of the Constitution of the United States. After a hearing the court below rendered a final decree against appellant dismissing its bill.

The tax is one upon the privilege or right to do business (*State ex rel. v. State Tax Commission*, 282 Mo. 213, 234, 221 S. W. 721), and if appellant is engaged only in interstate commerce it is conceded, as it must be, that the tax, so far as appellant is concerned, constitutionally cannot be imposed. It long has been settled that a state cannot lay a tax on interstate commerce in any form, whether on the transportation of subjects of commerce, the receipts derived therefrom, or the occupation or business of carrying it on.³ Plainly, the operation of appellant's pipe line is interstate commerce and beyond the power of state

³ See also *Leloup v. Port of Mobile*, 127 U. S. 640, 648, 8 S. Ct. 1380, 32 L. Ed. 311; *Kansas City Ry. v. Kansas*, 240 U. S. 227, 231, 36 S. Ct. 261, 60 L. Ed. 617, and cases cited.

taxation.⁴ But the contention in justification of the tax is that appellant is also engaged in doing local business, the basis of such contention being the facts concerning its ownership and use of property, other than the pipe line, and its various acts and activities within the state hereinbefore recited, and, further, that the purposes for which it is incorporated, as declared in its articles, comprehend other activities than that of transporting petroleum, namely, the acquisition and operation of telegraph and telephone lines, dealing in and transporting merchandise, and so forth.

[After a review of the leading decisions,⁵ the court concluded that the criterion for the several decisions was the question whether "the tax as a practical matter constitutes a burden on interstate commerce." As to this case it continued:]

The present case comes within the reasoning of the two decisions last cited. The business actually carried on by appellant was exclusively in interstate commerce. The maintenance of an office, the purchase of supplies, employment of labor, maintenance and operation of telephone and telegraph lines and automobiles, and appellant's other acts within the state, were all exclusively in furtherance of its interstate business, and the property itself, however extensive or of whatever character, was likewise devoted only to that end. They were the means and instrumentalities by which that business was done and in no proper sense constituted, or contributed to, the doing of a local business. The protection against imposition of burdens upon interstate commerce is practical and substantial and extends to whatever is necessary to the complete enjoyment of the right protected. *Heyman v. Hays*, *supra*, p. 186 (35 S. Ct. 403).

The court below grounded its decision chiefly upon *Cheney Brothers Co. v. Massachusetts*, 246 U. S. 147, 38 S. Ct. 295, 62 L. Ed. 632, but a review of that case will clearly demonstrate that it cannot be given the effect thus ascribed to it. Seven foreign corporations sought to avoid a Massachusetts excise tax on the ground, among others, that, as imposed, it contravened the commerce clause of the Constitution. This court held the tax invalid as to one of the corporations and sustained it as to the other six. The first of the six kept a stock of machine parts in the state, which were sold both within and without the state, and the court simply held that the portion of the business which was purely local was subject to local taxation. The second did an extensive local business in repairing cars of its own make and

⁴ See also *Eureka Pipe Line Co. v. Hallanan*, 257 U. S. 265, 272, 42 S. Ct. 101, 66 L. Ed. 227; *United Fuel Gas Co. v. Hallanan*, 257 U. S. 277, 42 S. Ct. 105, 66 L. Ed. 234.

⁵ *New York ex rel. Pennsylvania R. Co. v. Knight*, 192 U. S. 21, 24 S. Ct. 202, 48 L. Ed. 325; *Osborne v. Florida*, 164 U. S. 650; *Pullman Co. v. Adams*, 189 U. S. 420; *Norfolk, etc., Railroad Co. v. Pennsylvania*, 136 U. S. 114, 120, 10 S. Ct. 958, 960 (34 L. Ed. 394); *Heyman v. Hays*, 236 U. S. 178, 185, 186, 35 S. Ct. 403, 59 L. Ed. 527.

in selling second-hand cars. The third employed salesmen who took orders for its product from local retailers and turned them over to be filled by the nearest wholesaler, and this amounted, as the court said, simply to one local merchant buying from another. The fourth and fifth were mining companies operating mines in Michigan, with offices in Boston, where their directors met, declared and paid dividends, and so forth. Interstate commerce was not affected. Indeed, it does not affirmatively appear that there was any such commerce to be affected. In the case of the sixth the commerce clause was not involved. The remaining case (*Cheney Bros. Co.*), in which the tax was held bad, was that of a Connecticut corporation engaged in manufacturing and selling silk fabrics. It maintained in Boston a selling office with an office salesman and four traveling salesmen who solicited and took orders subject to approval by the home office from which shipments were made directly to the purchasers. The court held that this did not constitute doing a local business, and said (page 153 [38 S. Ct. 296]):

The maintenance of the Boston office and the display therein of a supply of samples are in furtherance of the company's interstate business and have no other purpose. Like the employment of the salesmen, they are among the means by which that business is carried on and share its immunity from state taxation.

It will thus be seen that there is nothing in this decision upon which the decree under review can properly rest. Its effect is entirely the other way.

Some stress is laid upon the fact that the objects and purposes specified in appellant's articles of incorporation are not confined to the transportation of petroleum but include the doing of other business local in character. As to this, it is enough to say that none of these powers were in fact exercised in the state of Missouri; and so far as this case is concerned the power to tax depends upon what was done and not upon what might have been done. Moreover, the license issued by the state authorized appellant to engage "exclusively in the business of transporting crude petroleum by pipe line."

Nor is it material that appellant applied for and received a Missouri license or that it had the power thereunder to exercise the right of eminent domain. These facts could not have the effect of conferring upon the state an authority, denied by the Federal Constitution, to regulate interstate commerce. The state has no such power even in the case of domestic corporations.⁶ The statute as applied to appellant is unconstitutional.

Reversed.

[Mr. Justice BRANDEIS wrote a dissenting opinion based on

⁶ See also *Phila. Steamship Co. v. Pennsylvania*, 122 U. S. 326, 342, 7 S. Ct. 1118, 30 L. Ed. 1200.

this query: "Can it be said that this tax directly burdens interstate commerce?"]

COMMENTARY: Under our dual system of government it sometimes becomes desirable so to organize a business as to be clearly interstate or clearly intrastate so as to avoid complications, though most businesses necessarily engage in acts that subject them to both state and federal control. The motives for the avoidance of state control, its difficulties, and a method open to those who have no real need of doing business of a purely local nature, are illustrated in the Massachusetts tax case discussed herein and also in the case before us. On the other hand, a manufacturing corporation may find it convenient to confine its operations to a single state and sell all its product to a separate corporation, perhaps a subsidiary, and leave to the distributing corporation the task of adjusting its affairs to the requirements of various foreign laws and the federal control of interstate commerce.

A further significance of the case to business is that it aids in the formulation of the answer to the vexed question: what constitutes "doing business" within a state? With the vast growth in recent years of regulatory legislation the question has come up hundreds of times in the several courts. Still, because of the hesitancy of the courts about the formulation of general principles, it is doubtful whether, even aside from contradictions and inconsistencies, a satisfactory definition can as yet be extracted from the decisions. Several negative aspects have been worked out: thus, there can be no "doing business" in a state without some kind of physical presence there; physical presence and activity that is only incidental to or part of a larger transaction should not be separated from the larger transaction in connection with this question, at least where the point involved is a contrast between interstate and intrastate commerce. The present case assumes some of these negative aspects as already established. In addition, it lays down the principle that the test is not what a corporation is authorized to do, but what it actually does or has done.

May, 1926

N. I.

GRAVES RUBBER FOOTWEAR COMPANY¹

MANUFACTURER—RUBBER AND CANVAS FOOTWEAR

SALES PLANNING—*Manufacturer's Planned Sales Based on Salesmen's Estimates.* A company which manufactured canvas and rubber footwear

¹ Fictitious name used for purpose of disguise.

chiefly upon orders obtained by its salesmen from wholesalers and retailers established a sales promotion department in 1920 which was to plan sales by six months' periods. The company decided to base sales quotas for its branches on detailed sales estimates made by the salesmen for their respective territories rather than on records of past sales modified according to forecasts of general business conditions. The salesmen's estimates were to be revised by the branch managers and the sales manager in conference, and the final estimates, subject to revisions called for by current conditions, were to be the basis for plans of production, purchases, and finance.

(1920)

The Graves Rubber Footwear Company manufactured complete lines of canvas footwear with soles of rubber compound, and also rubbers and boots made entirely from rubber compound. The company did not manufacture goods for stock; production was based upon orders received by the sales department. Sales were made both to wholesalers and retailers.

The company maintained sales branches in 11 large cities in the United States. The territories served by these branches were contiguous, followed county lines, and included practically the entire United States. The branches maintained small stocks of finished goods with which to supply customers who were in urgent need of additional stocks. This was the only exception to the company's policy of manufacturing only on orders received.

Each branch employed about 10 salesmen, who were responsible to the branch manager. The branch managers were responsible to a general sales manager for the development of sales in their territories.

There were two selling seasons in each year for the company's products. The branch managers came to the factory for a conference with the general sales manager before each selling season. The salesmen conferred with the branch managers at the branches but were not called to the factory except under unusual conditions, usually at intervals of two or three years.

The company had compiled no statistical information for sales purposes prior to 1920. In that year, the president of the company announced the organization of a sales promotion department under the control of the sales manager. One function of the new department was to collect such statistical information as would assist the executives in planning sales and production. It was necessary for the executives to decide whether planned sales

should be based upon sales forecasts made by branch managers and salesmen, or upon past sales modified according to forecasts of general economic conditions. Such forecasts were obtainable from commercial economic services.

An analysis which the company made of past sales led to the conclusion that the sales volume depended upon the efforts of the distributors and weather conditions rather than upon general business prosperity or depression.

The president and sales manager decided that the sales forecasts should be based upon information supplied by the sales organization. It was proposed that each salesman each week, on the basis of the territory visited that week, submit to the sales manager a list of established customers, possible customers, and distributors of canvas and rubber footwear who could not be expected to be interested in the company's products. From this information, the sales promotion department could tabulate at the end of a selling season all retailers and wholesalers selling canvas and rubber footwear in the company's territories.

A report sheet was designed, to be filled out by the salesmen and branch managers prior to each selling season. This report called for detailed estimates by salesmen of the quantities of footwear which they expected to sell during the next season. The sheets were to be made out in duplicate; the originals to be sent to the sales promotion department at the factory, and the duplicates to be retained by the branch managers. The amount of the salesmen's compensation did not depend upon their reaching the quotas which they submitted. For this reason, the company believed that they would not try to underestimate their probable sales.

The sales promotion department determined by counties the total population of each salesman's territory, and from the salesman's own reports computed the total number of retailers and wholesalers selling canvas and rubber footwear in that territory. The retailers and wholesalers were classified into three groups: (1) actual purchasers, (2) possible purchasers, and (3) unlikely purchasers. From this information, each salesman's sales estimate could be checked, and, if it appeared unreasonably high or low, the company could revise it or secure further information.

After the preliminary estimates had been approved, the sales promotion department was to compile a quota for each branch

and also a total for all branches. The estimate for each branch then was to be sent to the proper branch manager, and the complete estimate submitted to the sales manager. All this was to be done prior to the semiannual conference of the branch managers and the sales manager. After the conference, the sales manager was to make a final estimate of sales for the following period. This estimate would be adopted as the plan of sales and would serve also as the basis on which the manufacturing, purchasing, and finance departments constructed their schedules.

It was provided that salesmen should write the sales promotion department a weekly letter telling of business conditions in their territories, giving the opinions of distributors as to the condition of the trade, and any other information which might affect the established quotas. Intelligent revisions then could be made.

The president was convinced that the sales promotion department would obtain more accurate estimates of prospective sales by this method than by a method which depended upon forecasts made by economic services of general business conditions.

COMMENTARY: The company desired to determine the sales quotas by salesmen's territories and in dollars for six months in advance. It would use the quotas as planned sales on which to construct purchasing, production, and finance schedules.

The company manufactured canvas and rubber footwear on orders received by the sales department. The products were necessities, or at least comforts, and were consumer goods. They constituted a homogeneous line; demands for the several products, therefore, were actuated by common influences. Distribution was national through branches controlled directly by branch managers who were responsible to a general sales manager at the factory. Each branch manager employed salesmen who sold to wholesalers and retailers.

The statistical problems were the choice of data to be incorporated into planned sales, and the construction of a routine method of gathering and compiling them.

Two bases for planned sales were available: (1) reports of expected sales as estimated by the salesmen and branch managers, and (2) analysis of past sales the trend of which would be projected after modification according to forecasts of general business conditions as published by commercial economic services.

At the time of the case, satisfactory data were not being obtained from the sales force; hence no information of that type was available.

Analysis of previous sales indicated that volume was influenced primarily by sales effort and only secondarily by general economic conditions. It was found, furthermore, that bad or good weather had a greater bearing upon sales than prosperity or depression. Sales effort consisted in attempts to sell more goods to wholesale and retail distributors, who in turn would have to sell more of the company's goods in order to buy more.

It was evident, therefore, that the dominating factor was competition, and that another distinct influence was weather conditions. National economic conditions were found to be of minor importance. That kind of data, therefore, which would emphasize competition would be the best. No attempt would be made to forecast weather conditions; economic conditions would be approached through appraisals of individual sales territories.

Upon these considerations, it was decided that reports by salesmen of probable sales would be the most useful data for establishing quotas. These would include influences not only of competition, but also of local economic conditions.

Here a sharp distinction should be drawn between national and local economic conditions. In national distribution of necessary consumer goods, general economic conditions will affect aggregate sales because general prosperity will affect all consumer purchases. It will require, however, wide differences in general prosperity to cause marked differences in aggregate sales. In other words, total national sales of a necessary good are not highly sensitive to changes in national economic conditions. This is in direct contrast with sales of a luxury consumer good or sales of an industrial good.

National business conditions effectually conceal changes in sectional or local conditions. National distribution of goods rarely will be uniformly proportional to possibilities by localities; thus the effect of sectional changes in prosperity upon total sales usually will be different from the effect that would be indicated by national changes in prosperity.

In relation to purchasing, production, and finance, however, national economic conditions will have greater effect than local conditions because here the manufacturer is concerned with obtaining industrial goods, the markets for which are relatively narrow and highly competitive both as to price and substituted commodities. The problem for every manufacturer of nationally distributed goods is, therefore, to interpret local economic conditions that affect planned sales, in terms of purchasing, production, and finance, which are influenced primarily by national conditions.

Since the data were to be estimates of probable sales, it was decided

to check them for reliability. The plan provided that salesmen submit current reports of established customers, of possible customers, and of those dealers who apparently could not be interested in the company's product. When all the territory had been covered, presumably every dealer therein would be included in these lists; from them all the dealers in each salesman's territory would be classified into three groups: (1) actual purchasers, (2) possible purchasers, (3) unlikely purchasers. Also the total population of each salesman's territory would be compiled from census reports. From the data on dealers and population, the salesmen's estimates of sales would be checked. It was not stated how this checking was to be done; probably units of population were not established, as this would have required a market analysis. It is a reasonable supposition that the checking consisted of simple comparisons of expected sales among territories having comparable conditions with regard to population and dealers. If marked discrepancies in expected sales were found, additional information would be asked for, such, for instance, as forecasts of local economic conditions, from which the estimates could be revised.

Salesmen were to write weekly letters concerning current economic conditions; from these letters reasonable revisions of probable sales could be made whenever changed conditions should force the conclusion that the old estimates were unworkable. Care would have to be exercised in accepting salesmen's estimates of the effect of local economic conditions upon sales.

There was danger in planning sales from salesmen's estimates in that possibilities which would be disclosed by analysis of the markets would be overlooked. Such possibilities could be measured only by special research including both extensive and intensive studies. Salesmen could not go outside their own territories nor would they have the ability or resources to perform researches within their districts.

If for any reason a market analysis was not desired, the method of estimating sales as employed in this case was an excellent way of planning sales effort of salesmen. It was inexpensive because it utilized existing facilities, it placed responsibility upon salesmen to plan their own prospects, and it provided a fair measure of control of sales. The adoption of the figures by the conference of branch managers was an important element of success of the plan because in such approval each of them was given an opportunity to incorporate his ideas and was charged with his share of responsibility for obtaining performance in accordance with the estimates.

A. J. H., Jr.
C. B. P.

May, 1926

CUSTEN MANUFACTURING COMPANY¹

SALES PLANNING—*Selection of Forecasting Method for Use in Budgetary Control.* A manufacturing company decided to adopt a system of budgetary control to include purchases, production, sales, and finances. As the control of these operations was to be based upon planned sales for one year in advance, it was necessary for the company to decide upon a method of forecasting sales. The method selected provided that the sales managers, on the basis of sales volume for the preceding five years and their judgment of probable changes in factors affecting sales, make a sales estimate for each product in terms of physical units. In order that all phases of the company's operations might be co-ordinated, these quantity estimates were to be converted into terms of dollars by means of price estimates prepared by the budget committee. Two other methods of forecasting sales were considered. One of these was rejected because its validity depended upon the assumption that the trend of sales for each product was identical with the trend of total sales. The other method was rejected because, instead of beginning with an estimate of sales by products, it began with an estimate of total sales volume, which then was distributed to the various products.

(1922)

The Custen Manufacturing Company produced two distinct types of merchandise. For each type there was a separate sales division with its own sales manager. In 1922 the company decided to install a system of complete budgetary control based upon planned sales for one year in advance, the system to take effect in 1923. The executives, therefore, desired to make use of a sound method of forecasting sales.

Three methods were considered: (1) By one method, the percentage increases of total dollar sales of the last year over total dollar sales of the preceding year would be determined and this figure applied as a common increase to the dollar sales of each product for the current year. (2) By another method considered, the total dollar sales for the coming year would be estimated from a forecast of general business conditions and this total would be allocated to the several products according to expected conditions influencing sales of those products. (3) By the third method, detailed estimates in physical units of sales of each product would be made and these estimates then would be converted into values and the total dollar sales obtained.

The first method was based on the assumption that the trend of sales of each product was the same as the trend for total sales.

¹ Fictitious name used for purpose of disguise.

This was known to be false, because conditions affecting sales differed for each product. Sales of some products were affected by style factors. Designs which proved popular would show tremendous sales increases for a time, and then, when the fashion ended, equally rapid decreases. Sales of the staple products changed at different rates and in different directions, although the trend for the group was upward. Furthermore, two new products had been added within the year, and sales of these should increase more rapidly than sales of any other product. Although this method of forecasting sales gave estimates by products, it seemed to be founded upon a fallacious premise; hence it was rejected.

The second method depended upon a forecast of general business conditions. Total sales in dollars for the ensuing year would be estimated by the application to the total dollar sales of the current year of a percentage of increase based on the trend of past sales and modified in the light of expected conditions of general business. It then would be necessary to determine sales by products. It was proposed that sales be estimated for each product and that these estimates then be adjusted so that their sum would equal the estimate for total sales.

The principal advantage of this second method was that the influence of general business conditions upon total sales could be measured more accurately than could the influence of general business conditions upon sales of the individual products. The

EXHIBIT I

ANNUAL SALES IN PHYSICAL UNITS OF SELECTED PRODUCTS OF CUSTEN MANUFACTURING COMPANY, 1918-1922 INCLUSIVE

YEAR	SALES IN PHYSICAL UNITS			
	Division X		Division Y	
	Line A Product 3	Line A Product 4	Product 1	Product 2
1918	129,714	94,968	13,606	2,937
1919	157,610	39,518	11,505	2,319
1920	112,324	74,173	12,400	2,452
1921	72,980	108,171	12,639	1,800
1922	60,000	145,960	19,437	2,749

HARVARD BUSINESS REPORTS

EXHIBIT 2

SALES ESTIMATES OF CUSTEN MANUFACTURING COMPANY
FOR 1923—DIVISION X

PRODUCT	SALES FOR 1922 IN PHYSICAL UNITS	ESTIMATED PER- CENTAGE CHANGE FOR 1923	ESTIMATED SALES, 1923	
			Physical Units*	Dollars†
Line A				
Product 1	271,200	+ 7.5%	291,500	498,000
2	68,400	+10	75,200	139,200
3	60,000	-15	51,000	81,600
4	145,960	+20	175,200	190,800
Totals	545,560		592,900	909,600
Line B				
Product 1	151,200	+ 5	158,800	432,000
2	180,000	+15	207,000	368,400
Totals	331,200		365,800	800,400
Line C				
Product 1	18,000	+10	19,800	22,800
2	17,160	+10	18,900	18,200
3	1,680	+10	1,800	3,100
4	3,240	+10	3,600	4,800
5	102,000	+15	117,300	256,800
Totals	142,080		161,400	305,700
Line D				
Product 1	10,800		10,800	15,600
2	120		120	100
Totals	10,920		10,920	15,700
Line E				
Product 1	67,200	+25	84,000	464,400
2	145,200	+25	181,500	796,800
3	22,800	+16.3	60,000	265,200
4	45,600	+84	84,000	435,600
5	22,800	+25	28,500	148,800
Totals	303,600		438,000	2,110,800
Line F				
Product 1	1,800	+50	2,700	224,400
2	1,800	+50	2,700	190,800
Totals	3,600		5,400	415,200

*Expressed in round numbers.

†Based on prices estimated by budget committee.

executives deemed the method unsound, however, because it involved the use of a predetermined total which would compel more or less arbitrary adjustments of the derived parts. This process, the executives maintained, was an inversion of the logical process whereby the whole was developed from its constituent parts, wherein lay the variable limiting factors.

By the third method, each product would be studied carefully and a figure established for its probable sales during the following year, without reference to probable total sales. The estimated total for the year would be merely the sum of the figures for the several products. The perspectives of the estimators would not be distorted by any preconceived ideas of what the final total should be. The special conditions of changes in demand, price levels, and competition would be considered separately for each product and their probable effects upon sales determined. This would permit the sales manager of each division to make an independent estimate for his own division. The executives believed that this was the logical procedure, since the sales managers were in a position to know the possibilities of their products and the conditions which affected sales of those products. Moreover, when an estimate was made by a sales manager, the responsibility for its performance was upon the man who made the forecast. Thus the forecasts actually would be planned sales. The company decided to use the third method in estimating sales for the budget.

The budgetary control adopted was complete; that is, it covered all phases of operation: purchases, production, sales, and

EXHIBIT 3

ACTUAL ANNUAL SALES OF CUSTEN MANUFACTURING COMPANY
1918-1922 INCLUSIVE, AND PLANNED SALES FOR 1923

YEAR	DIVISION X	DIVISION Y
ACTUAL SALES		
1918.....	\$2,857,228	\$1,937,927
1919.....	2,972,735	1,730,249
1920.....	4,311,542	2,831,965
1921.....	3,640,091	1,445,042
1922.....	3,916,411	2,194,163
PLANNED SALES		
1923.....	\$4,557,400	\$2,536,560

finance. Since physical quantities were the units used to measure purchases and production, and dollars were the units used in finance, it was necessary to express planned sales in both physical units and dollars, if the various operations were to be coordinated adequately.

The sales estimates could be made in terms of physical units and then converted into terms of dollar value, or the process could be reversed. The company had kept records of sales by physical units as well as by dollars. The executives decided that the original estimates should be made in terms of physical units. Such estimates would not have to consider probable variations in prices; whereas estimates in terms of dollars would have to consider variations both in quantities and in prices. Sales forecasts in physical units would be of more assistance in the planning of purchases and production than would forecasts on a price basis. The quantity estimates could be converted into dollar values by means of estimated selling prices for the physical units.

Accordingly, the sales manager for each division estimated in terms of physical units 1923 sales for each product in his division. The figures were based upon the probable effect of general business conditions and the trend of sales as disclosed by data for the preceding five years. A five-year period was selected because it was of sufficient length to include a complete cycle of fluctuations in sales, and, consequently, to reveal the underlying trends. Sales data were compiled for each product as shown in Exhibit 1.

The sales managers did not employ mechanical means for forecasting increases, such as the application of the average rate of increase for the past five years to figures for the current year. Instead, the sales managers, on the basis of their judgments as to the influence of various current factors, and expected changes in styles, conditions of demand, prices, and competition, modified the trends disclosed by the sales figures for the five-year period. In this way, the sales managers arrived at percentages of increase or decrease for each product. These percentages were applied to actual sales for 1922 to obtain sales forecasts for 1923.

At the time the forecast was made, figures for only 11 months of 1922 were available. From these and past experiences, sales for the entire year were estimated and used as the basis of computation.

Estimated physical sales by products for 1923 then were sub-

mitted to the budget committee, which consisted of the president, treasurer, production manager, and the two division sales managers. This committee formulated estimates of the expected sales prices by products; the dollar sales then were computed by multiplying the estimated physical sales by the estimated prices.

The final results, in dollars, of the forecast, together with totals were summarized for Division X as shown in Exhibit 2. A similar computation was made for Division Y.

The final results, in dollars, of the forecast, together with totals of sales for each of the past five years, as a comparison, were arranged as shown in Exhibit 3.

COMMENTARY: The problem here was to forecast sales in annual totals by products one year in advance. This forecast was desired for the purpose of introducing complete budgetary control in all phases of operation—sales, purchasing, production, and finance.

The company produced and distributed nationally several products. Marketing conditions for each product differed from those for the other products. The number of products was not constant—from time to time, some products were discontinued and others were added. The number of products was small enough, however, to permit individual and direct forecasts of the sales of each one, if this approach should be found desirable. Sales records for several years were available by products, both in dollars and in physical quantities. It was not stated whether the products were industrial or consumer goods.

The statistical problems involved were the choice of the method which would yield the most useful results, and the estimation of expected sales according to the method selected.

Three methods were considered: (1) determining for the year immediately preceding the one to be forecasted, the percentage increase of total dollar sales that year over total dollar sales of the year which had preceded it, and applying that percentage as the expected rate of increase in the dollar sales of each product; (2) estimating from a forecast of general business conditions expected total dollar sales for the following year, and allocating this volume to the several products according to expected conditions affecting each product; and (3) making for each product detailed estimates of expected sales in physical units, which then would be converted into selling values to obtain the total expected dollar sales.

The first method, which was rejected, assumed common rates of increase or decrease for all products; that assumption was known to be contrary to fact.

The second method assumed that a forecast of general business conditions would be of assistance in forecasting total sales by application of the forecasted change in economic conditions to the trend of sales. The forecast of total sales then would be broken down into estimates for the several products. Although it was admitted that total sales would reflect general business conditions, it was known that the several products would be affected differently and thus would require special adjustments. Since, therefore, the figures for the several products would have to be adjusted in relation to a predetermined total, it was reasoned that this method was illogical, hence unsound.

The third method proceeded squarely upon definite estimates of sales in physical volumes for each product. These would be made by the sales managers. Prices then would be estimated by collateral studies. By combining volume and prices, the dollar sales would be found. This procedure was believed to have three advantages over the other two: (1) it placed the responsibility upon the divisional sales managers to forecast their own sales volumes; (2) it yielded sales in physical volume and in dollars, both of which were necessary for budgetary control; and (3) because the two variables of volume and price would be determined separately, it was expected that more accurate forecasts would result. The third method was adopted because of the foregoing advantages.

Records of past sales by products in physical volume were studied to reveal underlying trends. The period used was five years, which was of sufficient length to include a business cycle. Trends were not computed mathematically; nor was any mechanical process followed, such as applying to the next year an increase over the last year equal to the average range of increase for five years. Any changes disclosed in the sales of each product were modified by judgment in the light of expected business conditions that would affect that product; the resulting estimate of change then was expressed as a percentage. To determine the expected sales for 1923, this percentage was applied to the sales of 1922. This was done separately for each product. This method avoided technical computations, yet it constituted sound statistical practice. It merely illustrated the principle that the exercise of intelligent judgment is a necessary tool in business statistics.

The first results were forecasts of sales in physical volume, for each product. These data were necessary to obtain budgetary control of purchasing and production. Then, forecasts of dollar sales of each product were obtained, and combined to show total expected sales in dollars. The total figure, because it represented expected income from sales, would be employed in control of finances, and, therefore, was more important than the forecasts in dollars for individual products. A comparison of the figure for total sales in dollars with the require-

ments for purchases, production, and other expenses would yield estimates of expected net income for the year. Thus, it is evident that the method followed was sound from the view-point of procedure and of suitability for desired results.

There was, however, a serious defect in the company's plan under the conditions of this problem—it used only one method of forecasting. No matter how good that method, its results should have been checked by another method. Whenever possible, it is desirable to use an alternative and independent process by which to check estimates. In this case, the second method considered—that of forecasting aggregate dollar sales and dividing that figure among several products—should have been used as a check upon the method actually employed. The effects of changing business conditions were considered in the method chosen by applying them to each product separately. The second method would have proceeded by the application of changes in general business conditions to the aggregate sales; that process would have measured the composite effect upon all sales. When the aggregate forecast had been secured, it would have been distributed among the individual products according to forecasts of the percentage which sales of each product would bear to total sales during the coming year. Such forecasts would have required a study of corresponding percentages during past years, and would have been derived from recent trends modified to give effect to the influence of style factors and economic conditions upon the proportionate sales of each product.

The company would have had to exercise judgment in forecasting those percentages; a difficulty would have arisen from the discontinuance or addition of products. Had this estimating been done carefully, however, the results would have become a useful check upon the dollar sales in total and by products as forecasted by physical units.

Since the prices already had been forecasted as a step in the third method, they could have been divided into estimates of dollar sales by products determined by the second method; such division would have yielded estimated sales of the products in physical quantities. Thus, figures comparable with all those obtained by the third method could have been obtained by the second method.

The method of forecasting by aggregates has the advantage that it offers a more stable base for estimates, because the figures are larger. It affords, furthermore, a perspective of the entire sales problem. There is danger that in the study of details only, larger errors will occur because of the smallness of the several bases employed, and that desirable perspective will be lost.

The results obtained by the two methods would differ. It then would be necessary to test each result. If there were reason to believe that

the forecast for any one item by either process was satisfactory as it stood, it could be adopted as the final figure; if, however, there was no reason to believe that the forecast for any item by either method was satisfactory, adjustments would be necessary. Probably in most cases, these adjustments would consist merely of an arithmetic average of the two sets of figures.

Unless those responsible for routine selling effort are satisfied that the forecast is reasonable in terms of expected performance, it is difficult to secure complete cooperation in attaining the standards set. Unless figures by products or by other basic units are obtainable, sales control will be difficult. Both of these conditions were satisfied in this case. The only weakness in the plan was the dependence upon the single method of forecasting—the failure to check results by another method.

May, 1926

A. J. H., Jr.
C. B. P.

SARGENT MANUFACTURING COMPANY¹

MANUFACTURER—PIPES, FITTINGS, TOOLS

PRODUCTION FORECAST—*Change in Basis for Determining Stores Quantities.*

Several years after it had installed a stores record system, a company manufacturing pipes, fittings, and small tools considered changing the existing method of estimating future production as a basis for determining the proper stores quantities of its various products. Instead of using the weighted sales in units for the previous four years as a basis for arriving at estimated future production, some members of the management recommended that future production requirements be determined by study of the business cycle.

(1922)

The Sargent Manufacturing Company, which produced pipes, fittings, and small tools, originally had no system for the control of stores. Because of the lack of an adequate check, stores had been ordered haphazardly, and while frequently some orders were delayed through lack of parts, for other parts the supplies were sufficient to last several years. Several years prior to 1922, therefore, the company had installed a stores record system.

In 1922 some members of the management were in doubt as to whether the company should continue the existing method of estimating future production as a basis for determining the proper quantities of its various products to be kept in stock.

¹ Fictitious name used for purpose of disguise.

The procedure already in operation used the sales of each product for the previous four years as the basis for arriving at the quantity to be manufactured in the following year. The record sheet for tabulating these figures had ten columns: four for the sales, by products and sizes, of the four preceding years; four for the percentages which the various itemized sales in each year bore to total sales for the year; one for weighted averages based on sales for the four years; and one for the percentage distribution of the items in the weighted average column. Sales figures were in terms of quantities. The sheet for the year 1922 had the following headings:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
								Weighted Average	
1918	%	1919	%	1920	%	1921	%	Quantity	%

The sales figures for the latest years were given the greatest weight in estimates of future production; therefore, in the calculations for 1922, the sales figures for 1918 were multiplied by one; for 1919, by two; for 1920, by three; and for 1921, by four; and the totals were divided by ten, in order to determine the weighted average quantities, entered in column 9. After the weighted average quantity of each size was found, the percentage of the weighted average quantity of each size to the weighted average quantity of the total product was entered in column 10.

From the figures determined by the method just described, the balance-of-stores quantities form, shown as Exhibit 1, was made out. The weighted average quantities were entered in column 2 of this form. The unit weight and control weight columns were used, not for computation of minimum and maximum quantities, but as an aid in summarizing the different sizes for control purposes. The margin of safety in column 5 was to allow for any unusual demand for a product. For example, if the weighted average quantity for a tool of a certain size was 1,200 per year, the average to be produced in one month would be 100; it might not be sufficient, however, to have only 100 made up each month with no reserve stock to cover unusual demands, and a margin of safety of 50 might be established. In that case, 150 would be made the first month and 100 each month thereafter, in order that 50 might usually be on hand as a reserve. The reserve stock in any case was set at not more than 100% of the weighted

average quantity for a production period. For the greater part of the items with large sales, the reserves amounted to 25% of the weighted average quantities. This low reserve was possible because of the fact that the larger the number of sales, the more evenly they would probably be distributed throughout the production period. In the example just cited, the quantity to order into production, column 6, therefore, would be 150 for the first month, if there was no previous inventory on hand, and 100 for the following months. The planning department had to bear in mind also the quantity most economical to produce in setting the minimum and maximum quantities to order into production.

From the balance-of-stores quantities form, the basic minimum, 150 in the illustration used above, was entered on the card shown as Exhibit 2. This balance-of-stores card was kept by a bookkeeping-machine operator in the general office, who, besides making the entries on the card, noted when the quantity available was approaching the basic minimum. If, for example, the basic minimum for an item was 150 and the amount available was 155, the operator would fill out a notice of minimum to be forwarded to the order clerk in the planning department, who would put through a production order.

The management was in some doubt as to whether it should continue to use this method of determining future production, since the sales of two or three previous years might have no relation whatsoever to the sales of the next year, and the arithmetical computations of the weighted average quantities could not be relied upon as a definite index for future production. Although several executives believed that the figures obtained by such a computation should be compared with estimates of probable sales submitted by the selling department, past experience had proved that the estimates of the selling department could not be relied upon to any extent. Since neither the arithmetical index of the accountant nor the estimates of the selling department would enable the management to make intelligent estimates of the quantities of each product to be manufactured for future periods, a different procedure should be adopted. Those who held this view recommended that future production should be determined by a study of the business cycle. For example, if, after a study of the most reliable business forecasting services, it was believed that a 15% improvement might be expected in the following year, 115%

of the output of the current year should be produced in the next year. The application of this method was advised for all products at the beginning, but it was suggested that an executive keep in constant touch with the conditions of production and sales during the second year, so that he would be in a position to advise concerning cases to which this method could not profitably be applied in the future. The company was improving its budgetary procedure, and had carried this to the point where many of the executives were willing to rely upon the budgeted sales as a basis for determining stores quantities, rather than to use figures computed solely from the sales of the past.

Eventually, the proposal was adopted, with satisfactory results.

COMMENTARY: One of the important things to observe about this case is that almost *any* system for the control of stores was better than the entire lack of system which had previously prevailed. Prior to the use of the four-year system described in the problem, no adequate check had been in operation and stores had been ordered in a haphazard fashion. The result was that the company was constantly having orders delayed because certain parts were out of stock, while the supply on hand of other parts was sufficient to last for years, though the design of the part might be changed at any time. The methods described in the case must, therefore, be regarded as a step forward.

Nevertheless, the calculation of stores quantities by the method in use could not be permanently satisfactory. In a series of years of increasing business, a constantly increasing inventory would be projected into the future. In a bad year following a boom period, the results might easily be disastrous. The contrary situation would arise when, after a series of years of declining trade, business began to improve once more. In that case, the computed inventory would be substantially diminished just at the time when larger quantities were wanted. The improvement in the budget procedure might therefore well be availed of to provide a better basis for determining stores quantities; the estimated sales were, in fact, adopted, with satisfactory results.

It is of interest to note that the margin of safety allowed upon the stores quantities was approximately in inverse proportion to the quantities themselves. This is in accord with the statistical rule that the larger the quantities dealt with, the smaller is likely to be the percentage of variation. Beyond that, however, the rule had an excellent business reason behind it; the larger the quantities, the larger the amount of money invested in the item; it was therefore important to

restrict increases on these larger items. An increase of 100% in one of the small items, on the other hand, would mean very little difference in the financial investment in the inventory.

April, 1926

T. H. S.

NICOLLETTE CHEMICAL COMPANY ¹

MANUFACTURER—CHEMICALS

SUPPLIES—*Accounting for Expenses for.* In this company, supplies were issued from the storehouse to any department upon receipt of a requisition signed by the foreman of the department. The company was undecided whether to charge freight, handling, and storehouse expenses on supplies as an additional cost of supplies when requisitioned, or to consider those charges as general overhead expenses.

(1922)

The Nicollette Chemical Company was undecided whether, in regard to supplies, to charge freight, expenses of handling, and storehouse expenses as an additional cost of supplies when requisitioned, or to treat those charges as general overhead expense. The supplies consisted of approximately 4,000 different articles, ranging from bricks and cement to small machine bolts, nuts, and washers. The company always had maintained a balance-of-stores control as a check on the quantity on hand and as a guide for determining when to order. A cost accounting system which would provide detailed costs for both manufacturing and non-manufacturing departments was gradually being developed.

All supplies were purchased by the purchasing department in the city office. No purchases were made except on receipt of a purchase requisition signed by the storekeeper and approved by the factory superintendent. The purchase requisitions, which were made out in duplicate, indicated the quantity and kind of the supplies to be ordered, whether they were to be delivered to the storehouse or to a department, whom to notify, and the account to be charged. The duplicate was kept at the plant, and the original was sent to the purchasing department.

When the purchasing department ordered the supplies, it sent a copy of the purchase order to the receiving clerk. The price and terms, whenever known, and also the route of shipment were

¹ Fictitious name used for purpose of disguise.

included on the order. When the supplies arrived, the yard teamster received orders from the receiving clerk to deliver the goods to the place designated. The receiving clerk was responsible for the proper receipt of all supplies and raw materials, including all parcel-post packages, except that when supplies were delivered directly to a department, the foreman usually was made responsible for checking the quality as well as the quantity received. In either case, the check was made against the carbon-copy of the purchase order, and any variation was noted. The receiving clerk reported to the purchasing department whenever goods were received, and no invoice was paid unless his report was satisfactory.

Supplies delivered directly to a department were not entered on the balance-of-stores records, but were charged immediately to the department on the voucher record, and the vendor was credited. Supplies delivered to the storehouse were charged to the storehouse controlling account and entered on the balance-of-stores cards.

EXHIBIT I

ANALYSIS OF REQUISITIONS FOR SUPPLIES IN NICOLLETTE CHEMICAL COMPANY, BY MONTHS, 1920 AND 1921

Year and Month	Manufacturing Departments	Non-Manufacturing Departments	Construction	Maintenance	Delivered Direct to Departments
1920					
January.....	\$ 2,421.70	\$ 2,684.50	\$ 702.44	\$ 3,849.50	\$ 1,890.50
February.....	2,307.14	2,713.42	911.18	2,671.81	1,301.16
March.....	2,016.43	3,104.16	2,077.50	3,514.82	1,979.64
April.....	1,963.68	4,876.54	2,640.37	4,070.16	1,760.20
May.....	2,379.29	2,431.74	1,346.68	1,813.12	1,463.40
June.....	2,501.06	2,614.60	943.21	2,890.79	1,911.81
July.....	2,517.25	3,043.12	719.67	4,112.67	867.14
August.....	2,311.14	3,209.61	1,989.02	5,281.15	1,329.11
September.....	2,222.47	4,529.13	2,334.11	3,495.65	1,400.60
October.....	2,175.18	6,729.21	3,332.31	5,312.34	1,078.67
November.....	2,095.91	4,858.87	2,852.22	5,844.43	1,109.14
December.....	1,380.62	2,657.26	2,071.78	3,870.31	987.50
Total.....	\$26,291.87	\$43,452.16	\$21,920.49	\$46,726.75	\$17,078.87
1921					
January.....	\$ 1,224.76	\$ 1,755.67	\$ 673.83	\$ 2,479.12	\$ 1,039.74
February.....	1,330.01	2,257.59	800.68	1,670.29	1,078.78
March.....	887.03	1,614.47	269.15	2,559.22	990.91
April.....	643.63	3,660.49	1,113.34	2,420.80	1,027.62
May.....	1,166.64	2,317.89	1,247.98	3,525.39	1,026.88
June.....	1,018.25	1,965.03	630.36	2,555.87	1,133.68
July.....	1,209.65	2,221.27	784.98	2,490.97	229.81
August.....	949.14	2,134.37	1,242.10	2,404.59	303.50
September.....	1,033.62	2,340.99	521.75	3,607.33	284.48
October.....	1,430.68	8,954.82	896.43	5,454.36	283.71
November.....	1,518.29	2,983.96	873.05	4,484.52	636.28
December.....	1,145.22	3,032.40	720.38	5,067.11	309.05
Total.....	\$13,556.92	\$35,238.95	\$ 9,774.03	\$38,719.57	\$ 8,344.44

Supplies were issued from the storehouse only upon receipt of a requisition order signed by the foreman of the department requiring the supplies. Requisitions were made in duplicate, specifying the kind and quantity of supplies wanted, the department to which they were to be delivered, and whether they were to be used for maintenance, plant construction, or manufacturing. The unit price and total amount were filled in by the storekeeper. The original requisitions were filed according to departments, and the duplicates were filed by articles, from which postings were made to the balance-of-stores cards.

Most supplies were received in comparatively small quantities, but frequently brick, cement, lime, clay, and other bulky materials were received in carload lots. In 1921, 18 carloads of cement, 4 carloads of lumber, and 2 carloads of brick were received. The freight on the cement was prepaid, but the total freight on the other 6 cars was \$680, and the freight on all other supplies was \$786.52. The total expense for freight, handling, and storing supplies was \$15,115.89 in 1920, and \$13,346.76 in 1921.

An analysis of the requisition slips for 1920 and 1921 gave the figures reproduced in Exhibit 1 and summarized in Exhibit 2.

In October, 1921, when a salvage department was established in order to dispose of old stores accumulated in the storehouse, supplies valued on the books at \$3,892.18 were transferred to that department.

The storehouse control was kept in one account in the general ledger. In order to localize any inaccuracies which might arise, however, the inventory of supplies was taken in 33 divisions. These groups, which were not rigid, were shifted whenever a bet-

EXHIBIT 2

SUMMARY OF REQUISITIONS FOR SUPPLIES IN NICOLLETTE CHEMICAL COMPANY, 1920 AND 1921

Summary:	1920	1921
Issued to Manufacturing Departments . . .	\$26,291.87	\$13,556.92
Issued to Non-Manufacturing Departments . . .	43,452.16	35,238.95
	\$ 69,744.03	\$ 48,795.87
Issued for Construction	\$21,920.49	\$ 9,774.03
Issued for Maintenance	46,726.75	38,719.57
	68,647.24	48,493.60
Total handled by Stores Department	\$138,391.27	\$ 97,289.47
Delivered Direct to Departments	17,078.87	8,344.44
Total	\$155,470.14	\$105,633.91

EXHIBIT 3

BOOK AND PHYSICAL INVENTORIES OF SUPPLIES IN
NICOLLETTE CHEMICAL COMPANY, 1921

Supplies	Book	Physical
Bags, Liners, and Twine.....	\$ 147.01	\$ 429.93
Bolts—Carriage, Machine, Stove, Nuts, Washers, and Lag Screws.....	1,107.99	1,258.39
Brick, Cement, Tile, Lime, and Clay.....	2,398.02	3,796.36
Carboy Stoppers, Washers, Wreaths, and Wire Closures.....	832.43	1,043.41
Drum Gaskets, and Bungs.....	46.92	134.26
Electric Supplies.....	1,452.54	1,719.83
Motors, Generators.....	5,004.14	4,894.14
Electric Wire.....	226.65	653.07
Elevator and Conveyor Spare Parts.....	949.01	925.56
Filter Cloth.....	3,642.53	4,050.09
Glassware.....	897.44	1,044.51
Hardware.....	1,578.56	1,886.13
Iron, Steel, and Shafting.....	503.80	620.97
Lead—Sheet, Pipe, and Miscellaneous.....	2,405.22	3,020.27
Lumber.....	658.25	1,034.55
Metals.....	125.41	112.10
Meters.....	6.00	6.00
Miscellaneous Items.....	1,370.31	967.35
Oils and Grease, Cotton Waste, and Wipers.....	368.60	403.49
Paint Materials.....	45.96	262.47
Pipe and Fittings.....	4,262.41	3,837.23
Pumps and Parts.....	3,290.81	3,390.45
Railroad and Crane Equipment.....	944.44	1,200.97
Rubber Goods and Sheet Packing.....	669.47	953.35
Raw Materials.....	34.23	59.48
Scales and Parts.....	1,324.55	1,182.02
Special Castings—Cast Iron.....	9,617.24	8,734.24
Compositions.....	686.44	739.19
Special Earthenware.....	10,111.84	9,002.19
Stoker Parts.....	851.56	841.66
Tower.....	841.17	927.39
Transmission, Gears, Sprockets, Collars, and Belting.....	3,068.40	3,187.40
Valves and Parts.....	2,710.01	2,908.93
Physical \$3,048.02 over Book	\$62,179.36	\$65,227.38

ter classification became apparent. The difference between these physical inventories and the book inventory was usually about 3% of the value of the supplies issued during the year. The book value of supplies was corrected to agree with the physical inventory by debiting or crediting the general profit and loss account. The number of units on hand of any article could be checked with the balance-of-stores card at any time. In order

to save labor, this check usually was made when the quantity on hand was low. An adjusting entry was made on the balance-of-stores card when it was incorrect. Both the book and physical inventories taken at the close of the fiscal year 1921 are given in Exhibit 3.

COMMENTARY: The general rule to be followed with regard to freight, handling and storage expenses, is that they should be added to the costs of the materials to which they refer, unless they are very small in amount, or unless unusual difficulty is encountered by that practice. In this case, the freight and handling charges amounted to 9.6% of supplies handled in 1920, and 12.6% in 1921. The alternative to adding those expenses to material costs was to include them in general burden; but the usual basis for distributing general burden to the product is not suitable for distributing handling expenses; there is no relation between the two types of expense.

Since the total amount of stores handled in 1920 was \$155,000, and there were 4,000 items, the average cost was about \$40 per item. It would not have been profitable, therefore, to go into too much detail in distributing the handling expenses. The larger items of freight inward could easily have been attached to the specific materials to which they applied. This would leave the balance of the freight expense, and the stores handling expenses, to be spread over the remaining items on some arbitrary basis.

There are two common methods of doing this: (1) To add a percentage to the materials supplied to each job or to each department; (2) To charge materials out at standard rates which include the invoice cost of the materials plus the handling charges. If the materials vary greatly in the extent to which they involve handling expenses by reason of differences in weight, bulk, delicacy, and so forth, they may be classified into two or three main groups and different percentage charges applied to them accordingly.

In so far as these supplies were used for current operations, they would themselves be included as overhead in the final costs. This being a chemical company, they would go into the process costs, like other materials, in monthly totals. It would, therefore, have been a simple matter to make percentage additions to these amounts, for the purpose of covering handling charges. But when supplies were used for construction purposes, they should have entered into the amounts to be capitalized; it was then particularly important that the proper handling charges be associated with the costs of supplies used.

Although the total book inventory and the total physical inventory differed by only 3%, yet Exhibit 3 shows that individual items varied

much more, and it was because of offsetting errors that the total error was so small. Attention should have been given to the matter of making the perpetual inventory records more accurate.

April, 1926.

T. H. S.

HUDSON SHOE COMPANY¹

MANUFACTURER—SHOES

COST ACCOUNTS—*Methods of Figuring Unit Costs for Raw Materials.* The balance-of-stores clerk and the chief accountant of a shoe manufacturing company were undecided upon the proper method of figuring the unit costs of raw materials, for accounting purposes, when materials were issued from stock. Five different methods of figuring the unit costs were considered: (1) the use of an average unit cost; (2) the use of the unit cost of the last shipment received of the item; (3) the use of the unit cost of the shipment having the highest unit cost; (4) the use of a unit cost for each lot received; and (5) the use of standard costs, with periodic adjustments for differences from actual costs.

(1921)

The Hudson Shoe Company, during the early part of 1915, decided to install a "stores" system. Accordingly, the company partitioned off a centralized storeroom and installed standard equipment for holding the leather and other important materials stocked before manufacture.

A balance-of-stores sheet was made out for each item of raw material stocked. On the card were noted a description of the item, the unit by which it was measured, and its location in the storeroom. Three main columns were provided on the balance-of-stores sheets. These columns were headed: "Ordered," "On Hand," and "Amounts." Under the heading "Ordered" were columns for entries of the dates on which orders were placed, the numbers of the purchase orders, and the quantities ordered. The "On Hand" section provided columns for entries of the dates on which materials were received and the quantities received; the dates materials were issued from stock and the quantities issued; and the balances on hand. The unit cost and the total cost of each receipt, of each issue, and of the balance of the article on hand were shown under the heading, "Amounts."

A minimum stock limit was set for each item, and when the

¹ Fictitious name used for purpose of disguise.

quantity on hand fell to that minimum, a replacement order was started. For most items, the size of order was prescribed definitely.

The accounting department had one controlling account headed "Stores," to which all purchases were charged. When materials were issued, this account was credited with the value of the issue, and the manufacturing operation account debited. The balance-of-stores clerk gave the accounting department the unit costs and the quantities issued, and this department then figured the total value of the issues.

The balance-of-stores clerk and the chief accountant discussed the method to be used in figuring the unit costs of the various items. Making a preliminary investigation of the methods used in other factories, the clerk and the accountant found five methods which the Hudson Shoe Company might use. They were not able to agree on which one of these methods to follow, and asked the general manager for a decision.

The five methods provided for:

1. The use of an average unit cost;
2. The use of the unit cost of the last shipment received of the item;
3. The use of the unit cost of the shipment having the highest unit cost;
4. The use of a unit cost for each lot received;
5. The use of standard costs, with periodic adjustments for differences from actual costs.

Under the first method, the total cost of each in-shipment plus the freight and express charges was added to the total cost of the quantity of the item on hand before the new shipment was received. A new cost per unit then was figured by dividing the total cost so obtained by the number of units on hand. Issues of stock were charged out at that average, until a new shipment came in and a new average was figured.

Under the second method, the unit cost of the last shipment received of an item was used as the unit cost value of subsequent issues of that item until the next shipment came in, when its cost replaced the previous one.

Under the third method, the highest unit cost paid for any part of an item then in stock was taken as the unit cost of any issue of that item.

The fourth method provided that a separate card stating the unit cost be kept for each lot received. The lot received first would be accounted as issued first, whether physically so issued or not, and its unit cost used until the lot was exhausted. Then the price of the second lot would be used until all that lot was charged off, and a similar procedure would be followed for subsequent lots.

The last method, that of using standard costs, required the selection of a fair standard cost for each item, at which to charge all issues of that item into process. Such a standard would be in effect for whatever period of time seemed suitable. Periodic adjustments in the book records of work-in-process and in the inventory of raw materials would be made for the differences between the total amounts charged at the standard costs and the actual average costs for the period.

COMMENTARY: Material costs may be used solely for guidance in setting sales prices; they may be used as measures of factory efficiency; they may be used in connection with computing wages or commissions; they are sometimes referred to in determining or contesting tax rates; in many instances, but not always, they are figured once and for all to serve any purpose that arises. In the cost problem of the Hudson Shoe Company, therefore, no solution should have been reached until it was decided what the costs were to be used for, and under what conditions.

In deciding its problem, the company should have considered the following factors: The use of an average unit cost would help to even out the effects of fluctuations in market prices. If the raw-material prices varied both upward and downward about a slowly changing average, and if the lots on hand at any given time probably had costs both above and below the average but not moving generally either up or down to any marked extent, then the use of an average cost would eliminate meaningless variations from both cost setting and factory measuring standpoints. It would make the figuring more complicated, however, if accurately carried out, for the actual unit cost of each lot would have to be kept, and, with each receipt, new averages should be figured for the lots actually in stock. As ordinarily carried out, however, by months, an average cost would represent a rough figure which might be fair and serve all useful purposes unless important price changes were going on. In the latter situation, that figure might be unfair on one side or the other.

In the writer's experience, one instance of complications arising from

the use of average costs was that of a wholesale grocery company which paid its salesmen a percentage of the net profits of their individual sales. The salesmen were allowed to vary prices within limits. The net profits were figured as the difference between costs and selling prices, less an established overhead charge. In ordinary times this plan worked well, using average costs, but when a business depression slowed down sales, and profits were contracted, the salesmen refused to continue their efforts unless the actual current costs, rather than average costs, were used.

By the use of average costs of raw materials, variations in the work of the purchasing department would be less subject to observation, unless each purchase invoice were scrutinized separately by a higher executive before payment. One purchasing agent strenuously argued in favor of average raw-material costs because otherwise, he explained privately, he always was questioned about a poor purchase but a good purchase was never noted. He was better satisfied when a record only of the average of his work reached the higher executives.

In defense of the use of average costs, it sometimes has been argued that the total costs of product should be the measure of efficiency of the factory, and that too frequent variations in raw-material cost becloud the internal operating facts which are more important to watch. Nevertheless, if in the present case the factory costs were to be used as measures of factory work, it would seem to have been desirable either to enter raw materials at a standard unchanging cost and to make corrections at the end of the accounting periods for variations in actual purchase prices, or else to keep the material costs separate from other cost items. To use varying costs of materials in the costing of work-in-process would have been indefensible where the costs were used to measure factory efficiency, since such measurement probably would be intended primarily to disclose actual variations in costs of labor and overhead. Factory efficiency and purchasing efficiency are two separate matters, and neither can be measured accurately unless the figures pertaining to each are kept distinct. On the other hand, if costs of finished product were to be used as guides for price-setting, the averaging method of costing raw materials would have been desirable, because prices could be related to an average cost of product more satisfactorily than to each lot. For pricing purposes, the period of time to be used in the average would depend upon many production and marketing factors.²

The use of the cost of the latest shipment was recommended by a certain manager when, on a rising market, the costs were to be used publicly either in wage or tax discussions. This same manager would not

² See Cohoon Radiator Company, 1 H.B.R. 440; commentary, 2 H.B.R. 534.

consider the cost of the latest shipment during times of falling prices.

The expedient of using the cost of shipment having the highest cost sometimes has been adopted in place of the cost of the latest shipment in times of declining prices, for the purpose of holding the selling department to as high prices as possible. The Hudson Shoe Company perhaps would have found that method best, if the cost figures were likely to reach the attention of competitors. Many companies, however, find it advisable to use a separate method for costing bids to customers, as distinct from measuring efficiencies of work in process.

The actual unit cost of each lot received was the only truly accurate figure, and if the management wanted the true facts, that was the only choice possible. It would have required rigid control of materials, including physical identification and separate records of each lot as it was used. Such accuracy is particularly desirable when materials are bought for specific orders. If the company's situation was chiefly non-competitive, however, so that accuracy to a fine degree was not needed, or if material costs were a small part of the total costs, it is probable that the use of unit costs for each separate lot would have entailed more expense in bookkeeping and stores control than would be justified. If standard materials were purchased in many lots for regular production, there would have been little significance in cost figures based upon actual costs of the specific materials used. On the other hand, if competition was keen, and it was important to watch material costs carefully, the use of actual unit costs probably was the most suitable practice.

June, 1926

G. J.

CROCKER & LANG VENEER COMPANY¹

MANUFACTURER—LUMBER AND VENEER

COST ACCOUNTS—*Allocating Raw-Material Cost to Finished Products.* A company manufacturing veneer found only 30% of the logs purchased suitable for veneer and made the rest into lumber. Three-fourths of the cost of the logs was charged to veneer and one-fourth to the lumber by-product. This method allowed a substantial profit on the veneer and a small profit on the lumber. The company, wishing to reduce the selling price of its veneer in order to increase sales, considered decreasing the percentage of raw-material cost charged to veneer. It was undecided whether to charge two-thirds of the cost to veneer and one-third to lumber, whether to charge the cost on the basis of the actual

¹ Fictitious name used for purpose of disguise.

quantities used in each product, or to allocate the cost in proportion to the amounts obtained from the sale of the finished products.

(1922)

The management of the Crocker & Lang Veneer Company, of Boston, wished to increase its sales of veneer. The company found only about 30% of its logs satisfactory for veneer,² and made the remainder into lumber. Three-fourths of the cost of the logs was charged to veneer and one-fourth to the lumber by-product. This distribution of charges allowed a good profit on the manufacture of veneer and at the same time a small profit on the manufacture of lumber. The company was considering decreasing the proportion of the raw-material cost charged to veneer, in order to make practicable a reduction in the selling price of the finished product.

About 50% of the material used by the company's veneer plant was yellow birch and hard maple logs obtained from Vermont. Although logs suitable for lumber could be obtained by sawmills for from \$15 to \$20 a thousand feet, the cost of obtaining logs suitable for veneer was about \$50 per thousand feet. This high cost resulted chiefly from the care which had to be exercised in the selection of logs for veneer. The Crocker & Lang Veneer Company sent men from the factory in Boston to travel through the sections of western Vermont where high-grade maple and birch were produced and pick out suitable logs either in the woods or at the mills. Similar methods were employed in the selection of walnut and yellow poplar logs. The cost of mahogany and foreign woods, which the company obtained through brokers in London who were acquainted with the needs of veneer plants, occasionally was more than \$200 a thousand feet.

The company had considered charging two-thirds of the raw-

² Veneer was a term applied to thin leaves or layers of wood. Generally these were made of valuable wood and laid over a core of inferior wood. Veneer was cut from the logs either with thin saws or with knives, after the logs had been softened by being steamed for several hours.

The veneer sawed from each log was kept together throughout the processes of drying, flattening, and shipping. The salesmen went out with samples from each log. The samples were selected so as to give the best idea of the color and figure of the lots. As all veneer from one log would react similarly to the same kind of varnish and polishing and would have a similar figure on it, the users of high-grade veneers always desired to obtain the product from one lot for use in one room or on one piece of furniture. Veneer was sold by surface area; the prices were set on the basis of the species and quality of logs from which the veneer was obtained and the beauty of the figures.

material cost to veneer and one-third to lumber. The company estimated that if it divided the cost in this ratio, it would experience a slight loss on sales of lumber but would be able to reduce the selling price of veneer so as to undersell competitors and increase its sales of that product substantially.

It also had been suggested that the company charge the cost of the raw material to the veneer and the lumber on the basis of the actual quantities of the raw material used for each product. That is, since 70% of the logs purchased were made into lumber and 30% into veneer, lumber would bear 70% of the raw-material cost and veneer the remaining 30%. This method would result in a large increase in the profit on veneer and in a loss on lumber.

Another plan which had been discussed provided that the cost of the raw material be allocated to the products according to the amounts obtained from their sale. Thus, if out of \$60 worth of logs the company made \$150 worth of veneer and \$30 worth of lumber, the veneer would bear \$50 of the expense and the lumber \$10.

The decision of the company is not on record.

COMMENTARY: The more important problems arising in this case were marketing problems rather than cost problems. The method of apportioning costs between veneer and lumber would make very little difference to the welfare of the business; but cutting the price of veneer, the company's principal product, in order to enter into a more strenuous competition with other producers might make a substantial difference to its welfare.

There is an implication in the statement of the case that the selling prices could not be changed unless the allocation of costs to the two products also was changed. That, of course, is not true. The company could fix any selling prices it thought proper, regardless of costs, provided it believed that its marketing policy and the *aggregate* resulting profit would justify them. The division of costs between the two products would in itself make no difference to these aggregate profits.

In order to make the effect of the various proposals more clear, the following tabulation has been constructed. For this purpose it has been assumed that logs for veneer were purchased for \$50 per 1,000 feet, that veneer was sold at \$175 for the equivalent of 1,000 feet, and that the residual lumber logs had a market value of \$15 per 1,000 feet. The figures will become clear if it be assumed that 10,000 feet of logs

were purchased for \$500, yielding 3,000 feet of veneer and 7,000 feet of residual lumber:

BASIS OF ALLOCATION	VENEER		LUMBER	
	Cost per 1,000 Ft.	Resulting Profit	Cost per 1,000 Ft.	Resulting Profit
1. 75% to veneer, 25% to lumber*.....	\$125.00	\$ 50.00	\$17.85	(Loss) \$2.85
2. Two-thirds to veneer, one-third to lumber.....	111.10	63.90	23.80	(Loss) 8.80
3. Actual cost to each.....	50.00	125.00	50.00	(Loss) 35.00
4. Proportion to selling value.	138.90	36.10	11.90	3.10

*Computed as follows: since 10,000 feet of logs cost \$500 and 75% of this amount was allocated to veneer, \$375 represented the cost of the 3,000 feet used for veneer. The cost per 1,000 feet, therefore, was \$375 divided by 3, or \$125. Since the selling price of veneer was \$175 per 1,000 feet, the profit on 1,000 feet was \$50. Similarly, the total cost allocated to lumber was 25% of \$500, or \$125 for 7,000 feet. The cost per 1,000 feet, therefore, amounted to \$17.85, which, with a selling price of \$15, resulted in a loss of \$2.85 per 1,000 feet.

Of the methods shown, the third is obviously foolish; veneer was the principal product, and high prices were paid for logs in order to obtain the small quantity of veneer they contained. To charge veneer and lumber equally would produce ridiculous results which could have no practical significance. The most reasonable procedure would be to allocate the cost in proportion to the selling value of the two products, a procedure which is followed in practice by many lumber concerns producing different grades of lumber. If any complications should arise in following this practice because of fluctuating market prices, it would be well to determine a fixed proportion representing the average ratio between the two products. In other words, a combination of the first, second, and fourth methods could be obtained by setting a fixed fraction for the charge to veneer, this fixed fraction to represent approximately its proportion of the total selling value of the two products, over a period of time.

No mention is here made of the possibility of costing the lumber exactly at its selling price, or at a standard selling price, as is often done in the case of by-products.³ The present case assumes, however, that both products are to show a profit; they must, therefore, be separately costed.

February, 1926

T. H. S.

³ See Vitex Chemical Company, 1 H.B.R. 135; commentary, 2 H.B.R. 415.

RED METAL MANUFACTURING COMPANY¹

MANUFACTURER—BRASS CASTING DEPARTMENT

COST ACCOUNTS—*Furnace-Hour Rate Substituted for Method of Charging Overhead as Percentage of Direct-Labor Costs.* In the brass casting department of a manufacturing company, overhead was charged to product as a percentage, varying according to the kind of materials used, of the total direct-labor costs of finished castings. To provide more accurate costs for competitive purposes, the company decided to compute, for each type of furnace, hour rates based on estimated normal rate of output, by which each type of work processed could be charged, on the basis of time required in a furnace, for all direct and indirect costs, including labor, supplies, general mill expense, maintenance and repairs, depreciation, and metal stores.

(1922)

The works cost accounting department of the Red Metal Manufacturing Company presented to the comptroller a set of furnace-hour rates to be used, in place of the then current methods, in charging operating costs of the casting division to the product.

The system in force at the time, 1922, was as follows: Each master caster operated under normal conditions five or six furnaces at a time; he was paid on a piece-work basis, the rate being expressed as so much per hundred pounds of good metal produced; his helpers were paid so much a round, or charge. A charge was the term used to describe one furnace cycle, which consisted of placing the raw material (copper and zinc) in the furnace, heating it to the proper temperature, stirring it, and pouring it into molds. The average cycle was of one and one-half to two hours' duration; the higher the zinc content, the shorter the time required. Heating was continuous throughout the cycle; the raw material was put into the furnace a little at a time, and each addition of material was allowed to melt before more was added. Pouring was commenced about a half-hour after the last addition.

The sum of the compensation paid to casters and to helpers constituted the direct-labor cost involved. All other costs, including payment of foremen, core-making, fuel, maintenance, depreciation, and rent, were grouped into one sum. The caster's piece-rate tickets indicated the shapes upon which he had worked

¹ Fictitious name used for purpose of disguise.

and the amount of time consumed. The helpers' wages were allocated to the product in the same proportion as the caster's.

Overhead formerly had been loaded as an arbitrary percentage of the direct labor based upon past experience. Some refinements of cost method recently had been introduced, however, whereby overhead was added as a varying percentage of direct labor, differing according to the kind of mixture in question, since bronze, for example, took, roughly, twice as long to melt as brass, while copper required one and one-half times as long as brass. But for some time it had been apparent that in order to meet competitive conditions, a still more detailed and exact method of cost accounting for the casting shop work was necessary.

The furnace-hour rates presented by the cost accounting department were based on the following procedure.

Basis of Normal Production. A test period of three months was decided upon. The potential theoretical production of the plant for a three months' period was computed by the engineers as 6,000,000 pounds. Allowing for repairs and idleness of equipment for all reasons, the engineers established a normal volume of production of 4,000,000 pounds. On this production all estimates were based in order to give complete absorption of overhead under normal conditions. Actual performance for the three months was recorded and adjusted in each case to the normal production, which was assumed to be 4,000,000 pounds.

Rent. The engineers, taking into consideration the type of building (Class A, B, or C construction) and the utility of the space for the purpose for which it was used, evaluated all space in the various buildings. If a department was in an inferior location, it received the benefit of the cheaper rent, but if it was in a better room than necessary, it was not penalized by a higher rent. All floor space was given a weight, based upon a system of rating in which a first floor in a Class A building was rated as 100%. A square-foot rate, used to apply rent to departments, was obtained by dividing the total rent of all buildings by the total weighted area. The casting department accordingly was responsible for the weighted area of its floor space times this unit rate. Although in this space there were 33 furnaces of 3 types which varied slightly in size, the variation was considered small enough to be ignored. Since it was estimated that 30,000

furnace-hours would be required to produce the established normal production of 4,000,000 pounds, an hourly charge for rent was obtained by dividing the total rent cost by 30,000.²

Fuel. The actual coal consumption of the three types of furnaces was recorded during the test period. Since the production of this period was below normal, the fuel consumption was increased to represent the assumed normal production. The relative operating time of the three types of furnaces was established by a study of past records. It was found that type *C* operated only about 2,500 hours to produce the normal production as against 27,500 hours for types *A* and *B*. By dividing the total cost of fuel consumed by each type of furnace by the number of hours it must operate to produce the normal production, a fuel-hour rate for each type was obtained which was added to the first element of rent.³

Relining and Repairs. Actual repairs for each type of furnace were analyzed over a period of six months, including the three

EXHIBIT I

TEST PERIOD ANALYSIS OF DIRECT-LABOR HOURS WORKED,
BY FURNACES AND SHAPES, IN RED METAL MANUFACTURING COMPANY

*I Flats and small billets—type <i>A</i> furnace.....	11,800 hours
II Flats and small billets—type <i>B</i> furnace.....	400
III Extrusion—Large, type <i>A</i> furnace.....	1,800
IV Extrusion—Large, type <i>B</i> furnace.....	3,500
V Shells, type <i>A</i>	2,000
VI Rods, type <i>C</i>	2,500
Total.....	22,000

*The six furnace-hour rates will be referred to hereafter by these numerals.

months' test period. This figure, which was corrected to allow for normal production, was divided by the total number of hours necessary for each type of furnace, in order to secure an hourly charge to be added to the elements already determined. It was found that type *B* furnace required 40% more maintenance than

² See Exhibit 6, page 96.

³ Six different furnace-hour rates were eventually found to be necessary to cover the three types of furnaces and various shapes of rods and bars which required different equipment and different amounts of labor in connection with the pouring.

In case electric furnaces were employed, records would be kept of kilowatt-hour consumption per furnace instead of fuel consumption.

type *A*, while type *C* required 20% less than type *A*. The total relining and repair charges were apportioned accordingly.⁴

Direct Labor. Two factors entered into determination of direct labor: the average number of furnaces used during the period, and the average number of men per furnace, per shape poured. Actual analysis of the work produced during the three months' period appears in Exhibit 1.

This total of 22,000 hours was corrected to 30,000 hours to obtain the normal production, in order that the relationship between the various shapes, as indicated by the hours during which they occupied the furnaces during the test period, might be maintained. By dividing the total hours of each shape, corrected to the 30,000 hours' total, by the possible operating hours for one

EXHIBIT 2*

COMPUTATION OF LABOR FACTORS FOR DIFFERENT FURNACE-HOUR RATES IN RED METAL MANUFACTURING COMPANY

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Rate	Average Number of Casters per Furnace	Average Number of Moldmen per Furnace	(a) + (b)	Relative Number of Men per Furnace	Average Number of Furnaces Used at One Time	(d) × (e) Labor Factor	(f) Expressed as Percentages
I	1	1½	14/6	14	7	98	36.76%
II	2	2	24/6	24	1	24	9.00
III	1	2⅓	10/6	10	2½	25	9.36
IV	2	1	18/6	18	3	54	20.18
V	1	1½	15/6	15	2	30	11.20
VI	2	2	24/6	24	1½	36	13.50
						267	100.00%

*See also Exhibit 6, page 96.

NOTE: To get direct-labor hourly rate for Number I:

Labor factor (I), times total pay-roll for test period equals amount to be absorbed by (I); this amount, divided by number of hours actually operated on (I) gives hourly rate. Thus:

$$\frac{36.76\% \times \$19,300}{11,800} = \$0.60.$$
 Indirect labor for (I) obtained in similar

fashion:
$$\frac{36.76\% \times \$8,300}{11,800} = \$0.26.$$

⁴ See Exhibit 6, page 96.

furnace, the average number of furnaces used per shape during the test period was obtained. This figure was the first factor required in determining direct labor.

The number of casters and moldmen required to pour each shape was definitely known, and was expressed as a relative. By multiplying the average number of furnaces poured during the period by the labor factor per furnace, a direct-labor factor per furnace per shape was obtained. This new factor, although called the direct-labor factor, actually took into account the type of furnace, the shape, and the labor. Six of these factors were determined; they were to be known thereafter as direct-labor factors. The direct-labor pay-roll for the test period was apportioned to the six furnace-hour rates according to the direct-labor factor. The indirect-labor pay-roll was handled in the same manner.

Supplies. Oil used in the molds, which was the only large item, was apportioned separately. Records were kept for the three months' period showing the number of gallons used for the different kinds of molds. The total expenditure for oil was increased to cover normal production, and was apportioned among the six rates on a basis of the results of the actual observations for the three months' period. All other supplies were grouped and apportioned to the various rates on a basis of the direct-labor factor.⁵

EXHIBIT 3

OIL DISTRIBUTION FOR COMPUTATION OF FURNACE-HOUR RATES
IN RED METAL MANUFACTURING COMPANY

I and II	Flats and small billets	77%
III and IV	Extrusion	7%
V	Shells	10%
VI	Rods	6%

General Mill Expense. This item, which included such accounts as works accounting, engineering, manager's office, employment, supplies, stores, and yard service, was distributed on the basis of the direct-labor factor after being increased to nor-

⁵ See Exhibit 6, page 96.

EXHIBIT 4

COMPUTATION OF FURNACE FACTORS TO DISTRIBUTE DEPRECIATION
IN RED METAL MANUFACTURING COMPANY

	(a)	(b)	(c)	(d)	(e)	(f)
Type	Average Number of Furnaces in Use at a Time	Relative Original Value	Furnace Factor (a)X(b)	(c) on Percentage Basis	Total Hours Operated by Type	Hourly Depreciation Charge $\frac{\$1,500}{(d)} \times (e)$
A	(from Exhibit 2)				(from Exhibit 1)	
B	7+2.5+2=11.5	1	11.5	40.6%	15,600	\$0.039
C	1+3=4 1.5	2 6	8.0 9.0	27.7 31.7	3,900 2,500	.108 .190
			28.5	100.0%		

mal according to the judgment of the men in charge of the departments incurring the expense.⁶

Maintenance and Repairs. Analysis of past records showed the type C furnace to be directly responsible for 40% of the cost of maintenance and repairs, because this type was operated at a higher temperature than types A or B. These costs were increased to provide for normal production and applied to the rate for type C furnaces. The balance of the maintenance and repairs costs was spread over the rates, including the type C rates, on the basis of the direct-labor factor.

Machine Depreciation. The ratio of original cost of types A, B, and C furnaces was one to two to six. The factor representing the relative number of hours each type of furnace would operate to produce normal production was multiplied by this factor of original value, in order to obtain a new factor on the basis of which the total amount of depreciation determined by the directors was apportioned to the various furnace-hour rates. This new addition to the rate took into consideration three elements: number of furnaces in use at a time; the original value; and total hours operated during the test period. The suggested practice was to compute depreciation on each individual machine as a defi-

⁶ Computed exactly as direct and indirect labor.

nite element of cost, but to pool the charges as built up for individual furnaces, and then distribute the total by means of furnace factors, as computed in Exhibit 4.

Metal Stores. The metal stores department received both old scrap and virgin metal, which it weighed into boxes or batches of the desired quantity. The output of the metal stores department was therefore measured by boxes. Since a mixture containing more ingredients required more labor in weighing out the batches, the relation between the scale-man-hours and the furnace-hours for the different shapes was established during the test period by time studies. Inasmuch as the same shapes generally took the same mixtures, the number of scale-man-hours per shape for normal production was established. The total cost of metal stores was therefore distributed to shapes on that basis, divided by the normal furnace-hours per shape to give an hourly rate.

Cores—for shell casting only. Raw materials for cores were figured at standard rates. The total direct labor for the test period divided by the core production, minus a 5% allowance for breakage, gave the direct-labor cost per core. Six thousand cores was assumed to be a normal production for three months. The total core-room rent was divided by this figure, in order to secure a per core charge, which was added to the labor cost per core.

EXHIBIT 5*

HOURLY RATES COMPUTED FOR DISTRIBUTION OF METAL STORES CHARGES IN RED METAL MANUFACTURING COMPANY

	(a)	(b)	(c)	(d)	(e)	(f)
Rate	Scale-Man-Hours per Furnace-Hour	Furnace-Hours	(a) × (b)	(c) on Percentage Basis	Share of Metal Stores Cost (d) × \$19,000	Per Hour Charge (e) ÷ (b)
I and II	0.3	11,800 + 400	3,660	38.0%	\$7,220	\$0.59
III and IV	0.4	1,800 + 3,500	2,120	22.0	4,180	0.79
V	0.3	2,000	600	6.2	1,180	0.59
VI	1.3	2,500	3,250	33.8	6,420	2.56
		(3,900)				
		22,000	9,630	100.0%		

*See also Exhibit 6, page 96.

EXHIBIT 6

AMOUNTS BY ITEMS, AND IN TOTAL, IN SIX FURNACE-HOUR RATES OF
RED METAL MANUFACTURING COMPANY

ITEM	I	II	III	IV	V	VI
Rent.....	\$0.112	\$0.112	\$0.112	\$0.112	\$0.112	\$0.112
Fuel.....	0.610	0.910	0.610	0.910	0.610	1.350
Relining and Repairing...	0.125	0.175	0.125	0.175	0.125	1.100
Direct Labor.....	0.600	4.350	1.000	1.110	1.080	1.040
Indirect Labor.....	0.260	1.870	0.431	0.478	0.465	0.450
Supplies, Oil.....	0.126	0.126	0.026	0.026	0.100	0.048
Other.....	0.218	1.940	0.364	0.405	0.392	0.378
General Mill Expense....	0.450	3.260	0.755	0.835	0.812	0.430
Maintenance and Repairs.	0.265	1.910	0.442	0.490	0.475	0.468
Extra Repairs.....	.....	.....	.....	.....	.....	1.200
Depreciation.....	0.039	0.108	0.039	0.108	0.039	0.190
Metal Stores.....	0.590	0.590	0.790	0.790	0.590	2.560
Cores.....	.....	.....	.....	.....	0.185	.....
Total.....	\$3.395	\$15.351	\$4.694	\$5.439	\$4.985	\$9.326

Depreciation, power, light, heat, and other overhead charges in the core-room were reduced to a per core basis. The total per core cost was then transformed into an hourly charge by multiplying by the normal number of cores used per hour. This hourly charge was added to the furnace-hour rate for type A furnace when casting shells. This was the only rate affected by core charges.

Recapitulation. The 6 final furnace-hour rates thus contained 11 parts, except Numbers V and VI, each of which contained 12. The general method of determining the rates was to assume an arbitrary figure of normal production, and to determine charges on that basis. One advantage claimed for this method was that

EXHIBIT 7

TOTAL COST FOR TEST PERIOD OF VARIOUS FACTORS, AND BASIS OF
DISTRIBUTION IN RED METAL MANUFACTURING COMPANY

ITEM	AMOUNT	BASIS OF DISTRIBUTION
Direct Labor.....	\$19,300	Labor factor
Indirect Labor.....	8,300	Labor factor
Supplies, Oil.....	2,000	(See Exhibit 3)
Supplies, Other.....	7,000	Labor factor
General Mill Expense.....	14,000	Labor factor
Maintenance and Repairs...	8,500	Labor factor
Depreciation.....	1,500	Furnace factor
Metal Stores.....	19,000	(See Exhibit 5)

any change in an individual element, such as labor, or rent, could be readily incorporated into the rate without affecting other elements.

The company decided to adopt the accountants' plan. During several years of use, it was found to give complete satisfaction, and no important changes of method were made.

COMMENTARY: The plan adopted in this case was undoubtedly sound; the rates when in actual use for a number of years gave complete satisfaction. The fundamental point here is that the furnace, and not the labor, was the real agent for production; it was the furnace which actually did the work, and which involved by far the bulk of the expenditures. Thus in Rate I the direct and indirect labor together amounted to \$0.86 out of \$3.395, or 25% of the total; for Rate VI, labor was \$1.49 out of \$9.326, or 16% of the total. In these circumstances, the labor costs could not wisely have been used as the basis for distributing the burden costs; it was necessary to determine, by a more direct method, the amount of each item of expense which each furnace would incur. The only remaining question is whether the furnace-hour rates were computed upon a sound basis.

Basis of Normal Production. The adoption of a period with normal production as the basis for computing the rates was proper; in any business the normal or standard burden rates should be such that, during a period of normal production, they will be fully absorbed by the product. If during such a period the volume of business cannot absorb the burden rates and show a profit, there is something radically wrong either with the rates or with the business. If, therefore, 30,000 hours was the normal working time for this company during a three months' period, and would produce a satisfactory profit, then it was correct to make all computations on that basis.

From the statement of the case at some points, however, there arises some doubt as to whether the necessary correction was made in the expense items, to bring them up from the 22,000-hour basis of the actual test period, to the 30,000-hour basis of the normal period.

Fixed and Variable Charges. Before examination of specific examples on this point, it should be emphasized that fixed and variable charges were differently affected by the number of hours used. Thus, direct labor was likely to vary almost exactly with production; if \$19,300 was the direct-labor cost for 22,000 hours, then for 30,000 hours the amount of this item would be $\frac{\$19,300 \times 30,000}{22,000} = \$26,318.18$. There-

fore, whether \$26,318.18 was divided by 30,000 hours, or \$19,300 by 22,000 hours, the resultant average hourly rate would be the same.

With fixed charges the situation was different. If the total rental charge to the casting division was \$3,360, this charge would be constant; on a 30,000-hour basis the hourly charge, therefore, would have been \$0.112, as shown in Exhibit 6, page 96, but on a 22,000-hour basis the hourly charge would have been \$0.153.

A consideration of these two instances shows that, for variable charges, it made no difference whether the actual costs of the test period were divided by the actual hours, or whether the standard costs were divided by the standard hours; the same result would ensue, and no error would arise. But in the case of fixed charges, it was important to divide the amounts by the normal standard number of hours; if the same amount were divided by the smaller figure of the test period, an error would arise. Between the two extremes there would be many items which were neither fixed nor proportionately variable; they would vary somewhat with increasing output, but not in exact proportion. Here, again, error would arise unless the amount for the normal period were divided by the hours of the normal period.

Computation of Items. As already stated, the computation of a few items in the case raises some doubt as to whether the adjustment to the 30,000-hour basis was made in all instances. The exceptions are discussed below.

Direct Labor. In Exhibit 2, page 92, the figure of 11,800 hours was used as the divisor in computing the labor factor; from Exhibit 1 it is seen that 11,800 was the number of hours for Rate I, on a 22,000-hour basis. But it has been shown that there was probably no error here, for in regard to such an item, if the number of hours were increased, the amount of money would be increased proportionately, and the same hourly rate would result.

Question may be raised as to whether it was proper to use *possible* operating hours for one furnace as the divisor, in order to obtain the average number of furnaces in use at one time. The text is, however, correct. By an arithmetical example it can be shown that, if the *normal* hours for one furnace had been used, the result would have represented the number of furnaces which, operating continuously for two-thirds of the time, would yield the required product (because maximum production was 6,000,000 pounds, normal was 4,000,000, and, therefore, normal idleness was one-third of maximum); the other one-third of the time they would be continuously idle. But these were not the facts of the case; to produce 4,000,000 pounds, two-thirds of the furnaces were, on the average, running all the time, rather than all the furnaces running two-thirds of the time.

General Mill Expense. The amount of this item is said to have been increased to a normal basis, though no figures are given. This, no doubt, is one item where the increase in cost would not be proportionate to the number of hours of increase; it was accordingly important to compute the cost on a 30,000-hour basis, and divide by that figure.

Maintenance and Repairs. The computation of the rate factors for this item is not easy to follow, either from the paragraph description, or from the various figures given. The paragraph appears to contain a contradiction; if the rate for type C was first charged with 40% of the entire cost, and then again shared in the general distribution, it is clear that this rate was charged with *more than* 40% of the total for the item. A possible explanation is that maintenance was charged to departments in two items, (1) an hourly charge for direct service costs, (2) a share of the fixed charges of the repairs department. In Exhibit 6, page 96, this extra charge is stated as a separate amount in the Rate VI column, namely, \$1.200. Now 40% of \$8,500, Exhibit 7, page 96, is \$3,400; to get the \$1.200 rate, the amount must have been divided thus: $\frac{\$3,400.00}{1.20} = 2,833$ hours. In Exhibit 1 the number of hours for Rate VI is 2,500; it may be assumed, therefore, that the figure of 2,833 represents 2,500 hours properly corrected to the normal of 30,000 total.

But it is stated that the balance of this item, amounting to \$5,100 (\$8,500 — \$3,400), was "spread over all rates on the basis of the direct-labor factor." Exhibit 2, page 92, shows the Rate VI was charged with 13.5% of the total labor; $13.5\% \times \$5,100 = \688.50 . When this amount is divided by 2,833 hours (the figure used in computing the extra repairs charge), the resulting rate is \$0.242, whereas the figure in Exhibit 6, under Rate VI, is \$0.468. Similar discrepancies appear if one attempts to reconcile the other rates.

Depreciation. This item appears to have been wrongly computed. Column (e) of Exhibit 4 adds up to 22,000 hours; these figures are used as divisors to get the rates in column (f). It would seem that the column (e) figures should have been increased to a total of 30,000, thus reducing the rates for this factor.

The total amount of depreciation was "determined by the directors," but "the suggested practice was to compute depreciation on each individual machine as a definite element of cost." Apparently, then, the \$1,500 total depreciation was not an arbitrary amount, determined by the directors at their pleasure, but was built up from the several amounts of depreciation computed on individual furnaces. The reason for pooling the depreciation charges in this way, instead of directly

computing an hourly rate for each furnace, evidently arose from the fact that various mixtures, taking different periods to melt and being used for different products, were put into the same furnaces. It was doubtless easier thus to pool the depreciation on all furnaces than it would have been to allocate the products to specific furnaces, as would have been necessary in order directly to compute specific rates.

Metal Stores. The time required for weighing out the various batches may be accepted as a fair basis on which to allocate stores-handling costs. But here, again, it should be pointed out that column (b) totaled only to 22,000 hours, and these figures were used as divisors to figure the rates. Unless, therefore, the total cost of \$19,000 was to be increased proportionately when 30,000 hours were worked, which seems unlikely, then this factor was not properly computed on the 30,000-hour basis.

April, 1926

T. H. S.

BATES COMPANY¹

MANUFACTURER—PAPER PRODUCTS

REGULARITY OF PRODUCTION—*Means Adopted to Effect.* A company which manufactured, both for stock and to order, a variety of paper products for some of which the demand was highly seasonal, undertook to reduce irregularities in production. For that purpose, it decided to adopt the following policies: Salesmen should endeavor to persuade customers to order further in advance of delivery dates, in some instances by offering price concessions. Production for stock was to be planned more carefully so that it could take place in the dull seasons. A satisfactory production schedule was to be prepared, and sales efforts should be adjusted so as to dispose of the output—sales efforts increasing when demand declined and decreasing when demand was heavy. Novelty articles and new merchandise should be introduced in periods of slack production.

(1913-1923)

The demand for some of the products of the Bates Company, an Ohio corporation manufacturing a variety of paper products, was highly seasonal. All the products were subject to cyclical variations in sales. The company was convinced that it should take steps to reduce irregularities in production, in order to protect the quality of its goods, to reduce labor turnover, and to keep manufacturing and selling expenses at a minimum.

¹ Fictitious name used for purpose of disguise.

The Bates Company originally had manufactured only pasteboard boxes, but had expanded gradually until in 1913 it produced approximately 6,000 articles. About 65% of production was on special orders and about 35% was for stock. The company classified its merchandise by lines which it called *A*, *B*, and *C*. The *A* line included jewelers' supplies, such as plain and fancy pasteboard boxes, flannel rolls, and marking tags. Most of the boxes were sold to jewelers to meet the holiday requirements. Sales in the *A* line in 1913 were approximately 19% of the company's total sales.

The *B* line included articles generally sold to wholesalers and retailers, such as stationers' supplies, crepe paper, and holiday goods. Holiday goods comprised table and room decorations, napkins, and similar articles. Sales of holiday goods were largest near the end of the year, but a considerable demand existed at Halloween, the Fourth of July, and other holidays. Sales in the *B* line made up about 35% of the total.

The *C* line included articles sold direct to the users, such as plain and printed tags and labels, and baggage checks. Sales of this class made up about 46% of the total.

In the *A* line, approximately 50% of the production was for stock and about 50% for special orders. All the merchandise in the *B* line was produced for stock. In the *C* line, nearly all the production was on special orders. Relative sales in the three lines for the five years ending in 1912 were as listed in Exhibit 1. These figures illustrate the tendency of sales in all lines to reach peaks in the fall of the year.

Control of all activities of the company was vested in the directors, each of whom was an active executive with an office at the main factory. The vice-president of the company was chairman of a merchandising committee composed of a merchandise manager for each of the five² principal classes of merchandise manufactured, the factory manager, and the purchasing manager.

Each of the five merchandise managers was chairman of a committee composed of executives connected with the production and sale of his class of merchandise. It was the duty of this committee to supervise the routine factory operations for its

² For convenience in factory control, the *B* line of merchandise was divided into three classes; namely, dealers' goods, crepe goods, and holiday goods, each in charge of a merchandise manager.

HARVARD BUSINESS REPORTS

EXHIBIT I

RELATIVE MONTHLY SALES OF BATES COMPANY BY
MERCHANDISE LINES, 1908-1912*(Average monthly sales in each year = 100)**A Line*—Merchandise such as pasteboard boxes, flannel rolls, and marking tags—largely sold to jewelers:

	1908	1909	1910	1911	1912
January	44	44	52	29	31
February	49	45	49	38	37
March	58	68	61	65	60
April	52	56	57	53	71
May	52	63	61	56	61
June	58	68	75	57	61
July	54	71	61	52	67
August	102	72	83	84	111
September	156	115	121	146	168
October	214	146	149	213	189
November	200	213	236	257	210
December	161	239	195	140	134

B Line—Merchandise such as stationers' supplies, crepe paper, and holiday goods—sold to wholesalers and retailers:

	1908	1909	1910	1911	1912
January	85	86	66	96	99
February	85	79	95	101	103
March	89	100	100	118	107
April	79	81	98	85	87
May	74	78	98	91	92
June	73	74	91	90	82
July	63	64	90	78	75
August	76	75	86	90	120
September	104	93	106	138	161
October	141	167	130	109	97
November	187	167	145	132	108
December	144	136	95	72	69

C Line—Merchandise such as tags, labels, and baggage checks—sold direct to consumers:

	1908	1909	1910	1911	1912
January	97	94	89	91	86
February	81	82	80	88	90
March	97	101	79	112	92
April	94	93	98	94	95
May	89	93	100	99	96
June	90	89	101	100	97
July	96	87	93	84	91
August	95	98	102	99	104
September	100	98	103	99	102
October	117	119	110	109	111
November	107	113	118	106	109
December	137	133	127	119	127

particular class of goods, and to recommend to the merchandising committee the introduction into the class of new articles and the discontinuance of old articles. The merchandising committee accepted or rejected these recommendations at its discretion. This committee, since it was composed of the chief executives for both production and sales, was in a position to harmonize those activities and to obtain effective cooperation in carrying out any policy it decided upon.

The Bates Company obtained national distribution of its output by means of its own salesmen, and gradually was developing foreign sales by the same means. Salesmen sold directly to wholesalers, retailers, and consumers. Wholesalers formed a comparatively unimportant link in the sales organization because the company had found that they emphasized questions of price, whereas the company desired to sell its products on the basis of their quality. The company maintained four retail stores: one each in Boston, New York, Cleveland, and Chicago. The company had established these stores primarily as sales agencies, but, finding that as such they were not profitable, had turned them into demonstration centers where instruction was given to retailers and consumers in methods of using Bates products. The company's terms of sale were 25% off list for purchases of less than \$500, 30% off for purchases of more than \$500, 2% discount for cash payment, net for payment in 30 days.

Orders for stock were initiated by the stock department of the factory. This department was under the general control of the merchandising committee. Each of the recognized lines of stock goods was in charge of a clerk who was responsible for seeing that the maximum and minimum limits of inventory fixed by the merchandising committee were observed. Overstocking or understocking frequently occurred, however, because of fluctuating demands. Orders for special articles were scheduled to the manufacturing divisions as received.

The average time required to produce an order was approximately three weeks. Because the factory was largely dependent on special orders, the factory manager frequently found it necessary to operate machines overtime during the busy season, while the same machines were either idle or operating below capacity in dull periods. This condition was undesirable for many reasons.

The selling point which the company stressed particularly was

quality. The company recognized that the production of merchandise of high quality necessitated the maintenance of a force of trained operatives. This was difficult when production was irregular. The company's rate of labor turnover averaged from 50% to 60% per year. When employees were laid off by the Bates Company in dull periods, they obtained work elsewhere and did not wish to return for temporary jobs in the busy season. The Bates Company normally employed approximately 1,500 operatives, of whom 60% were girls and women. The quality of the company's products demanded a higher type of worker than was employed in the average factory. The company had found that graduates of grammar schools and high schools were particularly desirable. Since this class of labor was obtained most easily in the summer months, the company desired to be in a position to recruit its force at that time.

Irregular operation of the factory was objectionable also because it was uneconomical. Overhead costs per unit of output increased during periods of curtailed production. The overtime work which was necessary in the busy season was unsatisfactory in respect of both the quantity and quality of the production. The company frequently refused orders in the busy season because the capacity of the plant was insufficient to fill them in the time desired, although they could have been filled easily in the dull season. Accepted orders occasionally were delayed beyond the promised delivery date because of unforeseen circumstances such as breakage of machinery. The factory manager desired to maintain a reserve capacity at all times so that he could meet contingencies such as breakdowns, and could fill emergency special orders from old customers whose good-will it was important to retain, or from new customers who demanded quick delivery. Because production was seasonal, the company had been unable to maintain a reserve capacity at all times.

The company was overstocked or understocked at times because sales failed to increase or decrease as expected. For example, sales of the *A* line usually almost ceased after the Christmas holidays. Occasionally, however, they extended well into the following month. It was difficult for the purchasing agent to make satisfactory schedules for purchases of raw materials to meet sales peaks which would occur months later.

It was likewise difficult for the treasurer to arrange finances during the periods of peak production.

The directors of the company considered four methods of reducing the irregularities in production of both stock and special goods. One executive suggested that salesmen endeavor to persuade customers to place orders further ahead of delivery dates in order that the factory might schedule work to departments more uniformly. The objection to this proposal was that customers in general had difficulty in forecasting accurately their requirements for nine months or a year later. This was true particularly of customers for the *A* line of goods. It was possible, however, that special inducements in the way of price concessions might influence jewelers to cooperate in this plan.

Another executive suggested that stock orders be scheduled more carefully and that production on them take place in the dull seasons. The adoption of this proposal could have only a limited effect, since stock orders and special orders were produced on different machines. It would be of assistance, however, in providing full-time employment to workmen, since on many classes of work, operators could be transferred from one type of machine to another. It was pointed out that the plan necessitated production on forecasts of future demand for stock goods and, hence, involved risks of overstocking or understocking. This forecasting would require much of the time of the higher executives and would add to the work of the company's statistical organization. Extensive transfers of employees from one class of work to another would necessitate the use of some method of training workers for different jobs and of some method of assuring a uniform rate of wages to employees transferred from their regular work to work for which rates of pay were less. The factory manager of the company had learned that a policy of "hire and fire" was detrimental to the quality of the products.

A further suggestion was that the introduction of important novelty articles be held in abeyance until the dull seasons, at which times the company could concentrate on the production and sale of the new merchandise. The executive making this suggestion contended that the company should introduce new articles continually during periods of depression. He thought it might be advisable to use the company's retail stores as laboratories to test the salability of new products before they were adopted

definitely. The policy of the company, heretofore, had been to introduce and sell products as they were designed.

Another executive maintained that the company could eliminate the irregularity in production of stock goods by laying down a definite factory schedule of manufacture each year and increasing sales effort to the degree necessary to dispose of the scheduled production. The executive believed this plan practicable inasmuch as the company was in a strong competitive position and the market for Bates products had not yet reached the saturation point. He believed that increased sales effort in periods of threatened business depression would reduce materially the falling off in production both of stock and special goods. He pointed out that the plan might be tried in connection with a few articles or a single line before the company became committed to it as a practice. An objection to his suggestion was that the company might find it difficult to forecast accurately what the factory production should be, and consequently might overstock.

The Bates Company decided to utilize all the proposals. Salesmen were instructed to begin soliciting orders for a new season immediately after the close of the old season. Small price concessions were made occasionally to secure orders ahead of the usual time. No customers complained that they were overstocked as a result of advance purchases.

Forecasting of sales, both in stock and special orders, was done by the merchandise managers. A standard production schedule for the factory was set by the merchandising committee for each item manufactured. This schedule was set for a period of a year and allowed for a normal growth of 7% annually. Merchandise managers checked daily the quantity of work on hand for each type of equipment in their departments and, through the merchandising committee, called for increased sales effort when orders were needed to maintain the production schedule. Stocks on hand were checked every month by the merchandising committee. Occasionally, the planned production schedule was revised if materially out of agreement with actual sales.

A number of new articles were kept in reserve to be placed on the market in periods of depression. Sales effort was reduced in times of business activity, and salesmen were trained then to introduce the new articles. This policy of basing sales activity on the rate of orders proved satisfactory. Arrangements were

EXHIBIT 2

RELATIVE MONTHLY SALES OF BATES COMPANY BY
MERCHANDISE LINES, 1913-1923*(Average monthly sales in each year = 100)**A Line*—Merchandise such as pasteboard boxes, flannel rolls, and marking tags—largely sold to jewelers:

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
January.....	34	103	73	87	114	115	62	207	200	83	140
February.....	43	126	91	91	126	129	75	166	78	108	137
March.....	68	110	91	110	145	170	88	75	90	94	133
April.....	64	115	85	134	128	175	93	51	84	97	142
May.....	65	119	94	130	147	142	111	23	81	100	98
June.....	56	142	116	142	145	105	128	35	81	120	95
July.....	55	122	118	103	69	82	120	26	71	118	65
August.....	80	91	101	83	76	54	66	60	76	82	54
September.....	146	82	157	92	73	56	80	169	120	104	101
October.....	235	79	119	94	90	65	94	261	126	131	104
November.....	196	62	92	79	54	67	135	104	121	89	82
December.....	158	49	63	55	33	40	148	23	72	74	49

B Line—Merchandise such as stationers' supplies, crepe paper, and holiday goods—sold to wholesalers and retailers:

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
January.....	104	122	82	93	101	75	62	152	137	113	137
February.....	105	101	79	95	80	90	66	175	79	123	124
March.....	99	161	101	136	126	111	98	115	126	116	134
April.....	89	150	122	131	143	115	102	116	126	108	128
May.....	96	127	99	104	116	117	102	78	112	115	111
June.....	80	122	108	99	111	122	113	78	95	89	84
July.....	67	103	81	83	84	104	101	99	77	76	74
August.....	92	100	81	80	83	92	91	94	83	85	71
September.....	145	117	102	88	81	87	118	88	87	89	83
October.....	129	40	114	103	114	110	125	94	108	101	96
November.....	107	32	125	108	96	67	130	68	97	103	90
December.....	87	25	106	80	65	110	92	43	73	82	68

C Line—Merchandise such as tags, labels, and baggage checks—sold direct to consumers:

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
January.....	101	105	85	93	120	79	82	117	98	91	113
February.....	88	101	89	90	104	85	66	118	91	98	105
March.....	101	112	102	112	108	92	80	123	105	103	119
April.....	96	105	96	100	105	105	90	134	100	82	101
May.....	100	104	106	100	98	143	87	83	102	107	116
June.....	95	108	99	90	86	132	97	107	99	97	92
July.....	95	89	90	77	94	162	107	96	95	91	82
August.....	93	94	92	88	86	80	116	112	99	94	86
September.....	96	97	105	100	95	81	127	84	100	103	91
October.....	115	104	113	118	113	99	130	103	112	120	114
November.....	100	93	109	121	102	113	103	72	108	116	101
December.....	120	88	114	111	89	29	115	51	91	98	80

made to train selected employees in different classes of work, and an unemployment fund was established from the company's surplus to be used in paying transferred employees the difference between their regular wages and the wages paid for the work to which they were transferred.

After 1914, the sales in the company's various lines usually were distributed throughout the year in such a way as to permit greater uniformity of production than had been possible previously. Figures showing relative monthly sales for the years 1913

to 1923 are given in Exhibit 2. During the business depression of 1920 and 1921, the company was able to maintain its factory force within 4% of normal. The labor turnover in 1923 was less than 25%, which was considered satisfactory by the executives of the company.

COMMENTARY: This record of the Bates Company's merchandising methods is one that should be very generally studied. Few concerns have recognized, as did the Bates Company, the impossibility of securing regularization of business by any one method. Budgeting, preplanning of production made possible by advanced selling, the introduction of new lines to fill in the gaps between peaks in the production and sales curves, and many other schemes and variations have been recommended and installed by companies seeking cure-alls for the irregularities of their business.

Each of these schemes helps. And each additional help strengthens the organization a little. The Bates Company used all the plans described, and perhaps other methods, each directed toward levelling out the irregularities of the company's business, and, as a result, attained an enviable position of security. No one of the various devices alone could be described as a "success" although each made its contribution.

Securing advance sales so that production may be scheduled where it will fit best in the year's program is helpful. But it is limited by the inability of retailers to estimate accurately for months in advance the vagaries of the buying public. If the policy were pursued too far, it would result merely in shifting the burden of uncertainty from the manufacturer to the retailers, and the latter were, in this case, mostly in weaker positions than the manufacturer. To induce the retailers to buy ahead unwisely inevitably would have brought difficulties to them sooner or later. The manufacturer thereafter would have their ill will. Prosperity would not continue if the company ruthlessly pushed advance sales. But so far as the retailer consistently could buy ahead, his advanced purchases made easier for the manufacturer the preplanning not only of the production program, but also of the financing program.

A manufacturer who can finish a substantial portion of his output for stock, ahead of orders, is in a fortunate position. The greater the proportion of stock production, the easier it is for the manufacturer to provide work for his factory when the customers are not buying. Unfortunately, relatively few manufacturers who make products for public consumption can produce safely far ahead of their market. In making any goods ahead of ascertained demand, there are risks that require careful analysis and experienced judgment. So far as it is safe,

however, production for stock aids greatly in regularizing production.

Intelligent timing of the introduction of novelty articles obviously is also helpful. Budgeting or preplanning are merely new words to describe intelligent planning in advance. Only by such planning can one anticipate the irregularities of business and find fillers for the valleys in production curves, and sources of revenue during periods of slack sales in the regular lines.

The methods mentioned above were major ones in the Bates Company's attack on business irregularity. The figures given for relative monthly sales indicate that the company was successful in achieving a more even distribution of output in the years following the adoption of the several policies mentioned. Sales no longer were uniformly small in the first months, and large in the last months, of each year. The difficulty of the task, however, is shown by the persisting variations in monthly sales of the different product groups.

The degree of success achieved probably cannot be attributed to the new policies alone, or even to a nameable list of means. That success no doubt was dependent also upon the cooperation of the entire personnel, and particularly of the managerial group. Without a spirit of cooperation throughout a plant, such schemes for regularization as have been mentioned usually would fall far short of effecting the desired ends. The day-by-day actions of the individuals within an organization, therefore, would have to be so guided as to contribute toward the common end—the advancement and security of the business.

June, 1926

G. J.

BOTHWELL SHOE COMPANY¹

MANUFACTURER—SHOES

STOCK OF MERCHANDISE—*Increasing by Manufacturer at Time When Customers Were Buying from Hand to Mouth.* In the spring of 1922 the customers of this shoe manufacturing company were buying from hand to mouth, a practice which had been inaugurated during the period of depression subsequent to the crisis of 1920. Competition in the industry was keen and manufacturing capacity was excessive. In meeting competition, an advantage was gained in being able to make prompt deliveries to customers. Hence it was proposed that the company should expand its in-stock department.

(1922)

The question of expanding the factory in-stock department called for decision by the Bothwell Shoe Company in May, 1922.

¹ Fictitious name used for purpose of disguise.

This question arose at that time primarily because many retailers were cautious about future commitments² and were inclined to

² The following table gives the prices of typical grades of sole and upper leather from January, 1919, to April, 1922:

AVERAGE WHOLESALE PRICES OF UPPER AND SOLE LEATHER
FROM JANUARY, 1919, TO APRIL, 1922

YEAR AND MONTH	UPPER LEATHER	SOLE AND BELTING LEATHER
	Price Chrome Calf "B" Grades (Boston) Dollars per Sq. Ft.	Price Sole Oak, Scoured Backs (Boston) Dollars per Sq. Ft.
1919		
January.....	.660	.785
February.....	.680	.815
March.....	.680	.815
April.....	.680	.825
May.....	.710	.850
June.....	.825	.900
July.....	1.100	.950
August.....	1.250	1.030
September.....	1.250	1.025
October.....	1.250	1.025
November.....	1.275	1.025
December.....	1.275	.915
1920		
January.....	1.275	.915
February.....	1.275	.915
March.....	1.275	.915
April.....	1.250	.915
May.....	1.175	.910
June.....	1.075	.900
July.....	.875	.900
August.....	.875	.875
September.....	.800	.875
October.....	.750	.800
November.....	.625	.725
December.....	.575	.625
1921		
January.....	.525	.600
February.....	.525	.550
March.....	.525	.575
April.....	.525	.575
May.....	.525	.550
June.....	.525	.550
July.....	.525	.550
August.....	.525	.525
September.....	.525	.525
October.....	.525	.525
November.....	.500	.525
December.....	.500	.525
1922		
January.....	.465	.525
February.....	.465	.525
March.....	.425	.525
April.....	.415	.500

continue their buying on a hand-to-mouth basis. In consequence, it was difficult to arrange the factory production schedule efficiently. The following is a brief description of the company's business.

The Bothwell Shoe Company, whose plant was located in Brockton, Massachusetts, manufactured men's shoes to sell at retail prices from \$8 to \$10 per pair, and also some women's shoes, of distinctly conservative style, to sell at retail prices from \$10 to \$14 a pair (May, 1922, prices). Women's shoes, however, constituted less than one-fifth of the company's output. Most of the Bothwell Shoe Company's shoes bore the company's own brand; a few were made unbranded or bore retailers' brands. The company's product was sold directly to retailers throughout the United States by a force of 22 salesmen operating from the Brockton factory as headquarters. Total sales in 1921 were \$2,750,000, \$550,000 of which represented shoes sold from stock, whereas the remainder were made to order. The rate of stock-turn in the in-stock department was usually between $1\frac{1}{2}$ and 2 times a year. The style range in Bothwell men's shoes was confined to about 20 conservative models, in which only slight changes were made from year to year, and normally 5 or 6 style novelty models which were changed more frequently. No women's shoes were carried in stock. Normally Bothwell shoes were sold by only one retailer in each town, but no agreement to that effect was ever made. Salesmen called on their customers with samples twice a year for the fall and spring seasons.

It was the policy of the company to quote net prices with no quantity discounts, but subject to terms of 4% for cash in 30 days, net 60 days, on goods shipped from stock. Shoes made to order were billed net. The company did not grant post datings, but frequently shipped shoes before the delivery date specified without changing the date of the billing from that expected by the retailer. In dealing with retailers the company generally followed a one-price policy. In the case of a few chain-store organizations, however, salesmen were permitted at their discretion to split their commission of 5% on sales with these large buyers.

Influenced by frequent suggestions from salesmen, the Bothwell Shoe Company, in 1921, began to enlarge its line of women's shoes by adding several new models. It was not the policy of

the company, however, to manufacture extreme novelty styles in women's footwear.

The in-stock department was an aid to the company in smoothing out its production curve over the year. In times of rising prices this department was a means of making a speculative profit. One of the principal reasons for maintaining this department, however, was to be able to offer prompt deliveries to retailers. In May, 1922, when retailers were ordering in small lots and asking for quick deliveries, the Bothwell Shoe Company found its in-stock department to be especially advantageous.

The factory in-stock department, on the other hand, meant capital tied up in finished goods and not infrequently the necessity of disposing of merchandise through other than regular channels in order to clean up the stock at the end of a season. It had been the experience of the Bothwell Shoe Company, furthermore, that the percentage of returns on goods shipped from stock was four or five times as great as on goods made to order. In shipping goods from stock, it was the policy of the company, whenever a retailer's order could not be filled exactly, to give him the next thing to it. Thus, if a retailer ordered 6½D's when that size and width of the specified model was not in stock, the company might ship 7C's of the same model. Under some conditions retailers accepted whatever they could obtain rather than wait until goods could be made to order, but in many cases the Bothwell Shoe Company was forced to accept returns on such orders.

When this problem regarding the expansion of the in-stock department arose, competition was exceptionally keen in all branches of the shoe industry and it was generally stated that there was a large excess capacity in the shoe manufacturing industry in the United States.

COMMENTARY: Under normal conditions the quantity of stock carried by this company had been adequate. The experience with retailers which is cited indicates, possibly, defects in the control of the in-stock department or a failure to keep salesmen informed regarding the stocks of merchandise on hand. Mere increase in the quantity of stocks carried would not necessarily have remedied this situation. It is to be noted that the rate of stock-turn in the in-stock department was only from 1½ to 2 times a year.

The real problem in this case is whether the company should have increased stocks because of the wide-spread practice of customers in buying from hand-to-mouth. That practice of hand-to-mouth buying was an outgrowth of the crisis of 1920 and the subsequent depression. It had resulted from apprehension on the part of retailers that prices would continue to decline. They, consequently, were buying in small lots and throwing the inventory risk, so far as possible, back onto the manufacturer. An increase in the quantity of stock carried in the in-stock department would not have modified the buying scale of customers. If it had any effect, it would have tended to prolong adherence to the practice of hand-to-mouth buying.

The fact that the rate of stock-turn in the in-stock department was between $1\frac{1}{2}$ and 2 times a year does not lend encouragement to the proposal for increasing the stock. The shoe business is a two-season business and a well-managed retail shoe store normally turns its stock at least twice a year. One would expect that a manufacturer who had a substantial volume of sales to order would secure a substantially higher rate of stock-turn. When the stock was turning at a rate no faster than in the Bothwell Shoe Company's in-stock department, it should have been possible to maintain the stocks and fill orders for immediate delivery if an adequate system of stock planning and control had been in effect.

Under the circumstances, therefore, the chief reason for expanding the in-stock department in May, 1922, would have been to secure speculative profit because of the possibility that the bottom of the market had been reached and that prices would rise. The table in the footnote on page 110, however, indicates that there had been slight change in leather prices during the early months in 1922 and that such change as had occurred had tended in the direction of weakness rather than strength.

When this problem arose in May, 1922, there was evidence that an improvement in general business conditions was imminent. The Harvard Committee on Economic Research, in its weekly letter of April 29, 1922, had stated the "outlook for the remainder of 1922 is for substantial business improvement accompanied by rising wholesale prices." Other things being equal, this general tendency toward improvement might have justified an expansion of the in-stock department for the Bothwell Shoe Company at that date. Other things were not equal, however, in this case, because leather prices were weak and there was the uncertainty as to future styles which is inherent in the shoe business; there was also a general belief that the shoe manufacturing capacity of the United States was overexpanded. That introduced

an element of instability which was not present in numerous other lines of business.

If business confidence were to improve and prices become firm, less hand-to-mouth buying would be experienced. The company could expect to secure its normal volume of sales. If prices remained weak and unstable, an expansion of the in-stock department was not wise because of the inventory risk that that involved. This leads to the general conclusion that it is not practicable for a manufacturing company to produce for stock beyond normal requirements with the hope of profiting on a rising market when that company is not manufacturing a staple commodity for which prices are fairly certain to be firm or rising.

November, 1925

M. T. C.

FISHBACK-HARRIS COMPANY¹

MANUFACTURER—MEDICAL INSTRUMENTS

REGULARITY OF PRODUCTION—*New Line of Products Added to Level Production Peaks.* In order to level peaks in production, a company manufacturing diagnostic and clinical instruments undertook the production of automobile accessories, which were sold by special salesmen to automobile and hardware wholesalers. When a period of business depression occurred, the special salesmen were discharged and the automobile accessories were sold by the medical supply salesmen.

COST ACCOUNTS—*Omission of Charge for Idle Time in Machine Rates.* In order to stimulate sales of other merchandise, this company desired to quote low prices on one line of goods and consequently did not include in its cost accounts for that line charges for idle time of machinery.

(1919-1920)

The Fishback-Harris Company regularly experienced serious production peaks in the manufacture of diagnostic and clinical instruments. Three lines of instruments were made—metal and glass syringes, hypodermic needles, and thermometers—in numerous sizes. Parts were manufactured and placed in stock ready for assembly when orders were received. The company was one of the pioneers in its field, and the reputation for its instruments was nation-wide. Annual sales of the company were about \$500,000.

In order to overcome the objectionable production peaks, it was decided to manufacture automobile grease guns. This

¹ Fictitious name used for purpose of disguise.

product was decided upon since it was possible to utilize the same equipment with which the company was provided for the manufacture of metal syringes. The patent for an automobile signal was procured, and the manufacture of that also was undertaken. Other small devices for automobiles were added in order to make a stronger line of accessories. New factory equipment was purchased for the manufacture of the signal and other new devices. After the adoption of the plans for manufacturing the new accessories, the 8,000 products of the company were classified into 5 lines.

Before the inclusion of the new lines, the diagnostic and clinical instruments had been sold to medical supply wholesalers and hospitals. The new products were marketed through automobile accessory and hardware wholesalers and sold by special salesmen. The average volume of sales of the accessory lines proved to be about \$100,000 per year, which was much less than the estimated sales and the capacity of the plant. During the period of rising costs in 1919-1920, the expenses of the company increased, and in order to reduce expenses later when sales decreased sharply, the accessory salesmen were discharged, and all the five lines were sold by the medical supply salesmen.

In order to increase sales, the company followed a policy of quoting low prices on one line with the expectation that orders in other lines would follow from the favorable terms offered on the initial order. This was particularly true of the diagnostic and clinical instruments, in which many sales were on special orders. In order to facilitate offering low prices to prospective customers, no charge for idle time was included in manufacturing expense or in operating machine rates. The management believed that if a charge for idle time were included, it would increase the prices of the company's products to a point where it could not secure orders from new prospects. The cost of a few products which were not used as "business getters" included a charge for idle machine time. For example, in the automatic screw department, there were ten standard machines and one special machine. Normal usage required the operation of eight standard machines. The other two standard machines were maintained solely for the purpose of insurance against breakdown delays and to enable machines to be set up without slowing

down production. The special machine cost \$9,000 and was idle three-fourths of the time. In order to absorb this idle time in costs, the company trebled the running rate of a standard machine to obtain an operating rate for the special machine.

COMMENTARY: The manufacture of automobile grease guns and other accessories apparently was undertaken because of the facility with which the company's plant could be used for that purpose rather than because of evidence that the company could market the accessories successfully. So far as the organization for selling was concerned, the initial arrangement, whereby the sales organization for accessories was segregated from the organization for selling diagnostic and clinical instruments, was sounder than the later makeshift of having the same salesmen sell both groups of products. Because of the complete differentiation of the two markets, a segregated sales organization was sound in principle.²

In omitting the charges for the idle time of machinery from the cost accounts by which the prices for the price-leaders were fixed, the company did not change its real costs; it merely deceived itself. It should have ascertained its true costs accurately and faced frankly the losses which were incurred on its price leaders. An expense for idle machinery was incurred whether or not it appeared in the cost accounts.

In view of the company's lack of acquaintance with the automobile accessory market, its shift in sales organization, and its failure to recognize its true costs, ultimate bankruptcy was almost inevitable.

November, 1925

M. T. C.

² See Tinkham, Littell, Inc., 1 H.B.R. 352; commentary, 2 H.B.R. 507.

LAMBERT WATCH COMPANY¹

MANUFACTURER—WATCHES

PRODUCTION PLANNING—*Centralization of, to Coordinate Departmental Activities.* The general superintendent of a company which manufactured watches of 37 grades, set monthly production quotas for each of the 15 departments. Aside from these quotas there was no centralized control of production; each department head controlled all phases of his department's activities. Because the resulting lack of coordination resulted in large inventories of goods in process, the company decided to establish a central planning department to be in complete control of production planning.

(1921)

¹ Fictitious name used for purpose of disguise.

The Lambert Watch Company, in 1921, employed approximately 4,500 persons in 15 departments, each of which normally had about 300 employees. Since the processes required for the manufacture of watches were highly specialized, each department was managed practically as an independent unit. The resulting lack of coordination led to large inventories of goods in process.

The Lambert Watch Company produced watches of 37 grades. Each month the general superintendent, in conference with the sales department, estimated the number of watches of each grade to be manufactured during the month following. From this estimate, the general superintendent determined how many of each part for each grade of watch were required from the individual departments. Then a departmental quota was furnished to each department head, who from that point had complete control of the operations within his department. Each department head purchased his own raw materials, had complete jurisdiction over his own workmen, and computed his own costs and pay-roll. All planning likewise was done in the separate departments, each of which regulated its own schedule of work, based on the monthly quota assigned by the general superintendent and the number of finished parts on hand in the departmental storeroom. In each department there was a storeroom for finished parts manufactured in that department. These parts were issued from the storerooms when requisitioned by the assembly department or by departments performing subsequent manufacturing operations.

Because of the large number of intricate and time-consuming operations required for the manufacture of high-grade watches, the rate of stock-turn of materials in process was low and at the same time the value of the materials in process was high. When the rate of stock-turn reached the low figure of once in 18 months, the president recommended that the control of production be centralized in order to prevent the inventory of materials in process from becoming more excessive.

The management decided to install a central planning department to be in complete control of production planning. The central planning department was to determine a basic manufacturing schedule and was to issue manufacturing orders to

each department at such intervals that the requisite number of parts needed to assemble a particular lot of watches would be completed and ready for assembly at one time. In this way, any lot of pieces going through the factory could be identified with a particular lot of watches to be assembled, and a check could be had on the efficiency of the manufacturing departments.

In making this decision the president took into consideration the fact that the large number of constituent parts of a high-grade watch required the use of machines which had to be reset in order to work on different parts at different times. Many parts were common to several grades of watches, some of which were comparatively inexpensive to produce, whereas others showed high unit costs. In connection with the centralization of production planning, it was provided that the inexpensive parts which were common to several grades of watches should be made for stock and issued upon requisition, instead of being made for each lot of watches ordered.

To make the work of the planning department fully effective, purchasing was taken out of the hands of the individual department heads and centralized under one purchasing agent, whose duty it became to insure the delivery of a proper supply of materials to each manufacturing department.

The management anticipated that the coordination of production schedules would bring the inventory of goods in process to the lowest point compatible with uninterrupted production. Although the central planning department involved a new element of overhead expense, this was expected to be more than offset by the economies secured not only in the reduction of inventories but also in the increased efficiency of the manufacturing departments.

The chief difficulties that appeared when the system was introduced resulted from the unfamiliarity of the clerks with the manufacturing problems. There was a tendency to be over-particular without regard to mechanical details. For example, the manufacture of the exact number of parts ordered was insisted upon. In the case of some of the machines, from one to two weeks were required to complete a set-up before the machine was able to produce parts in quantity. Then, in many instances, the small quantity of parts ordered could be completed in a half-day. There was, in consequence, a heavy loss of time in the

set-ups. It was considered advisable, therefore, when a set-up had been made to produce several months' requirements instead of one month's requirements. A further difficulty resulting from the inexperience of the clerks appeared in the scheduling of the different machines. Many of the machines were adapted to perform operations on several different parts. Frequently it became necessary to shut down one of these machines because the quota of a certain part had been completed and none of the other parts produced by the machine were needed at that particular moment; complications were caused in the department when, at some other time, several of the parts manufactured by the machine were ordered at once.

The company, furthermore, was hampered by a great mass of details which required a large clerical force. Each function was divided and subdivided to such an extent that the organization was hindered greatly, and also there was much duplication of effort. Much of the set-up of the organization had to be abandoned. Unnecessary details and the duplication of effort were eliminated as far as possible, and a large part of the recording, which appeared to be of no great value, was discontinued.

In two years' time the new system of control was operating satisfactorily. Although 11 of the 15 foremen left the company because of dissatisfaction with the changed methods, the assistant foremen had been trained sufficiently to fill the foremen's positions. All the difficulties of the system were of a nature that time and experience could overcome. The larger clerical force that was employed at first was reduced to such an extent that that portion of overhead expense was no greater than prior to the change. The inventory was reduced constantly; the total reduction in two years' time amounted to 33 1/3% of the value as of the time the change was put into effect.

COMMENTARY: The case well illustrates the need of considerable elasticity in a policy of production control covering so wide a variety of products and equipment as are met with in watch manufacture. The economies of a minimum of inventory in certain cases may be foregone profitably in order that greater savings, from machine preparation or the balancing of production over available equipment, may be secured.

Again, the skill and experience necessary to organize and install properly a centralized planning department are of a different and often

higher order than are later necessary for its conduct. Nevertheless, under the most favorable conditions of personnel and method, higher operating costs will be encountered until familiarity and automaticity are developed.

A growing emphasis is being placed by the management engineer upon the maintaining of morale during the installation of technical improvements. He is becoming increasingly aware of the high return which follows an initial investment of time, patience, and tact in the avoidance of human frictions and resulting losses in organization power.

In this case, however, it is possible that with the functionalization of purchasing, stores, and production control, the assistant foremen were qualified to carry on the executive responsibilities involved in the new arrangement, with a consequent reduction in expense.

In general, the case verifies the legitimacy of the management engineer's claim to recognition as a useful and valuable servitor of industry.

May, 1926

E. H. S.

BENNING ELECTRIC COMPANY¹

MANUFACTURER—ELECTRIC APPLIANCES

PRODUCTION PLANNING—*Graphs Used as Basis for Production Orders.* The general manager of the company, which manufactured five standard electric appliances, prepared schedules showing the number of appliances to be completed by specified dates. For each product a graph was maintained which listed the key manufacturing operations and showed, in terms of finished product, the number of units on which each operation had been performed since the beginning of the current production schedule. On the basis of these graphs, the planning supervisor issued production orders to the factory.

INVENTORY CONTROL—*Use of Graphs to Control Purchases of Raw Materials.*

For each of the five electric appliances which it manufactured, the company maintained a graph showing currently, in terms of finished product, the quantity on hand of each item of raw material needed for the manufacture of that product. On the basis of these graphs, the planning supervisor made a monthly report to the purchasing agent showing the requirements of each item for the following month; this report served as a purchase requisition.

(1921)

The Benning Electric Company manufactured five standard products: electric toasters, irons, radiators, ranges, and pads. The company manufactured these products for stock in accor-

¹ Fictitious name used for purpose of disguise.

dance with schedules set by the general manager. The schedules specified the total number of each kind of product to be made by a certain date. For example, the schedule for toasters which was delivered to the factory superintendent on January 1, 1921, called for a total of 30,000 toasters to be made by July 1, 1921. Revisions were made in the schedules whenever warranted by business conditions; in practice, the schedules for each product were changed or extended two to three times a year.

The company controlled manufacturing operations by means of two sets of graphs; one set to control raw-material supplies, and one to control work in process, illustrated here by Exhibits 1 and 2, respectively. A raw-material graph and a production graph were prepared for each of the five products.

The raw materials needed for the manufacture of a particular product were listed on the left-hand side of a sheet of coordinate paper. Across the top of the sheet were listed the days of the month and the quantities of the product scheduled to be completed on those days. Whenever any raw material was received, a horizontal line was drawn on the graph opposite the name of that raw material, the length of the line showing the quantity received in terms of finished product. Thus, in Exhibit 1 the line after "Nichrome Wire" does not indicate that 1,600 feet of wire had been received, but that enough had been received to make 1,600 toasters. The total length of the line shows, in terms of finished product, the wire received since the beginning of the schedule. By referring to the date over the end of the line, and

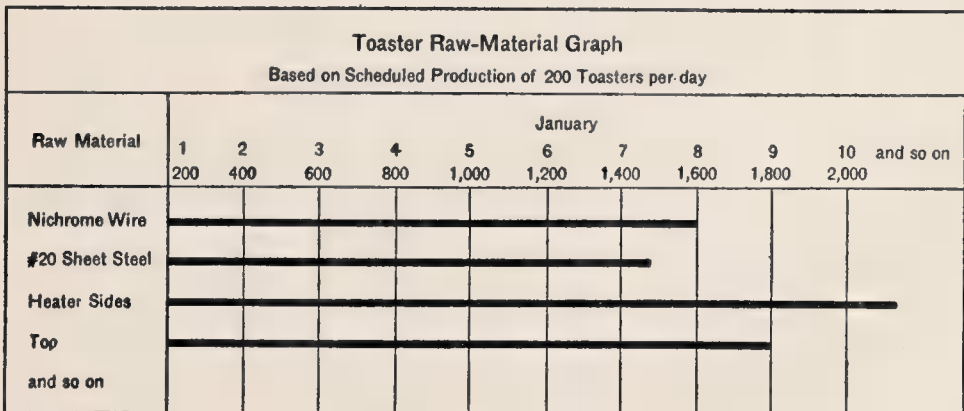


Exhibit 1: Illustration of graph used by the Benning Electric Company to control supplies of raw materials.

the current date, the executives could see how many days the supply of that raw material was behind or ahead of the schedule.

The total number of items listed on these raw-material graphs was about 300. The graphs were given to the planning supervisor, who, acting upon information drawn from them, made a report each month to the purchasing agent showing the requirements of each item for the month to follow. This report served as a purchase requisition.

Coordinate paper also was used for the five production graphs. On the left-hand side of each of these graphs were listed the operations necessary to the production of the constituent parts of the product, that is, the most important or key operations. The number of these varied for the different products from 15 to 75. The last operation listed on each graph was the assembling of the product.

Across the top of each sheet were listed the days of the month, with the corresponding number of units of product to be completed on each date according to the schedule. From daily reports showing the number of parts finished, lines were drawn opposite each operation listed, so that the total length of the line for any operation showed the number of units on which that operation had been performed since the beginning of the schedule. All operations performed were expressed in terms of finished product, regardless of the number of pieces required per unit of

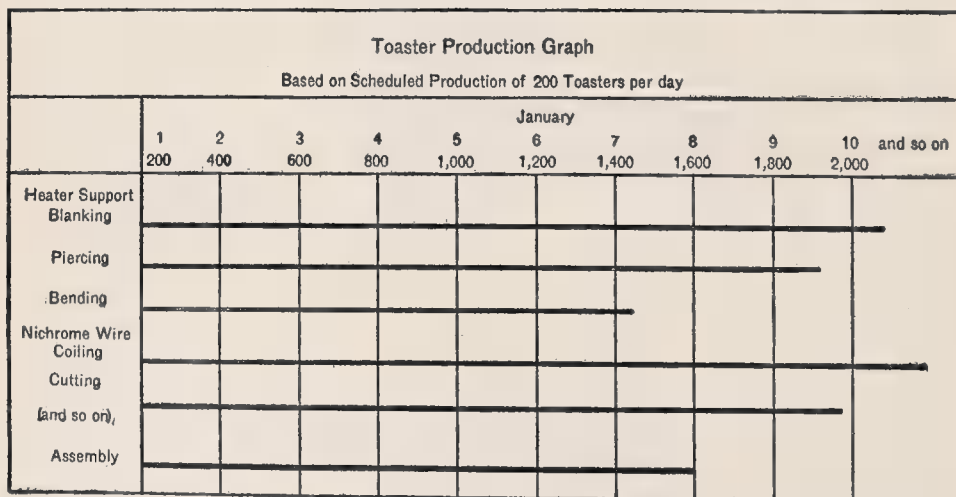
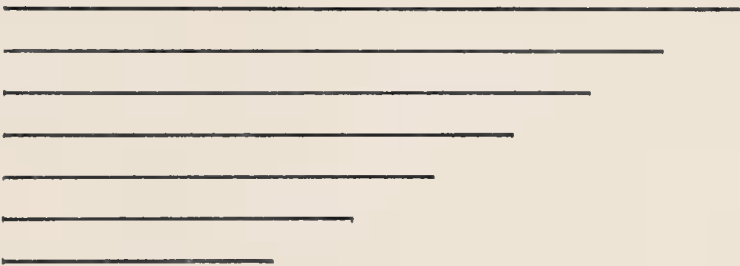


Exhibit 2: Illustration of graph used by Benning Electric Company to control work in process.

product. Consequently, the lengths of the different lines could be compared directly. Thus, if a certain operation was completed on 500 sides, of which there were 2 for each toaster, the line for that operation would be drawn to represent 250 units, or enough sides to make 250 toasters. The relation of scheduled production to actual production was apparent from a comparison of the date over the end of the assembly line and the current date. The lengths of the other lines showed the quantitative status of the constituent parts, in relation to each other, and in relation to the schedule.

These graphs also were kept by the planning supervisor, who, acting on the basis of the information they contained, issued production orders to the factory. The relative frequency with which he issued production orders for different parts, and the size of the lots ordered, varied with the conditions surrounding each part. Thus, one part he ordered every 3 days in lots of 600, and another every 10 days in lots of 2,000. In order to maintain uninterrupted assembly of finished product, it was his aim to keep the lines at the top of the sheet, representing the first operations, longer than the lower lines. If a perfect balance was maintained, the lines on the production graphs would look like this:



When the planning supervisor issued a production order, a light cross was made on the proper graph opposite the item affected at the point to which the line would reach when the order was completed. Thus, on the production graph in Exhibit 2, if a production order for enough heater supports for 300 additional toasters was issued, a cross would be made opposite the words "Heater Support" under the figure 2,300.

COMMENTARY: This company's use of charts for showing daily the quantities of work done in terms of finished product was a desirable aid

to effective management. The successful use of the charts was no doubt partly dependent upon the fact that production was limited to a few standardized articles for which the materials and operations were capable of ready classification. Attention should be called, however, to the amount of clerical work needed to collate the records of work done, to translate them into terms of finished product according to time rate of progress, to prepare the charts and to keep them accurately up to date. Attention should also be called to the fact that with so many items to watch, individual needs may have been overlooked if responsibility and action depended solely on the executive for whom the charts were prepared. The subordinate who prepared the charts and knew intimately the detailed facts, was in strategic position to note those points which should be given attention and which might be overlooked by the busy executive.

The monthly purchase requisition reports no doubt allowed the company to keep its raw-material inventories within reasonably low limits, and therefore contributed to economical production.

For the factory operations, the preplanning of work by means of flexible schedules, which showed for each major product the quantities to be completed in a given period, provided a suitable basis for the detailed ordering and routing of work on a standardized article.

In regard to such detailed work, the case states merely that the planning supervisor acted on the information shown by the production graphs, in issuing production orders to the factory. Under such conditions, a real issue is present: should those production orders be general in nature and serve chiefly to authorize the factory foremen to issue specific factory job orders; or should the planning supervisor's production orders themselves consist of the actual job orders?

According to the first alternative, the factory would be operating on a direct-line basis, with the foremen responsible for starting individual lots of work into process, for assigning the lots to workmen and machines, and for providing proper materials and tools. The other alternative, however, presupposes a functional control by the planning supervisor over the issuance of detailed job tickets to individual workmen, with complete reports as to the time and inspection of completed tasks. Such a control is more rigid, and permits of maximum economical use of facilities. The foremen then are more truly supervisors of workmen; the order and time of work, and the issuance of materials and tools, are centralized managerial responsibilities. The operation of such a plan is described in another case,² and some of the modifications in centralization which may be desirable are brought out in the commentary on that case. Many of the detailed refinements of a

² Snelling Machinery Company, 1 H.B.R. 125; commentary, 2 H.B.R. 412.

completely centralized control system described by G. D. Babcock as having been used at the plant of the H. H. Franklin Manufacturing Company in the production of automobiles, are also on record.³

Whether the Benning Electric Company used the general or the functional plan of shop control, the charts were important guides to the executives in maintaining the scheduled rate of output. It is probable that such charts would be of most value in otherwise uncontrolled shops, since a production control system itself, where it is properly developed, will call attention automatically to the variations from schedule of the work in the shop.

May, 1926

G. J.

³ Babcock, George D., *The Taylor System in Franklin Management*, The Engineering Magazine Company, New York, Second Edition, 1918. See, especially, Chapters IV and V.

PENMAN INK COMPANY¹

MANUFACTURER—INKS, COLORS, AND PASTES

PRODUCTION CONTROL—*Production of Various Items Expressed in Terms of a Common Unit.* The company, which packed the inks, show-card colors, and pastes that it manufactured, in containers of a wide range of sizes, decided to express the production of its eight bottling and packing departments in terms of a single unit. This was to facilitate comparisons between actual and scheduled production in the same department and between production in different departments. The unit selected was 1 cent of labor cost. A supplementary record was kept for each department showing by items production in terms of gross.

(1924)

In 1924 the production superintendent of the Penman Ink Company desired a record which would express production in the eight bottling and packing departments of the factory in comparable terms.

The company manufactured inks, colors for show-cards, and pastes. When the variety of the products and of the shapes and sizes of the containers in which they were placed was considered, the company sold, in all, 250 items. The departments in which the products were made and prepared for bottling worked at capacity. The quantity produced was regulated by the number of vats installed. Over these departments the production superintendent exercised no control and for them he had no records.

¹ Fictitious name used for purpose of disguise.

The only current record which he had of production in the eight bottling and packing departments was that of finished product received by the shipping department. This record was in terms of the number of gross received of each of the various items. The production superintendent proposed to find a single unit in terms of which total production in each of these departments could be expressed, regardless of the type of product or of the size or type of container used.

It was suggested that a suitable common denominator for reducing production of the bottling and packing departments to a comparable basis was labor cost. One cent of labor cost in an article could represent one unit. Although half the employees were paid day-rates and half piece-rates, the cost of labor for each item could be determined accurately. The labor cost for each item as of a particular time could be used as a standard for converting all production of that item into units. Only one standard would have to be established for each of four of the departments, because each of those four worked on what for purposes of measuring production could be regarded as a single item. The other four departments, however, which produced 75% of the total volume, worked on a variety of items for each of which a different standard would be necessary.

The use of a single unit for measuring production would greatly facilitate comparisons between actual and scheduled production in the same department as well as between production in different departments. Production orders were in terms of gross and were sent from the superintendent's office to the foremen of the various departments. At the beginning of each week these orders were summarized on a production schedule by departments. If the company decided to make use of a unit, as proposed, the quantities listed on the weekly schedules could be reduced to units in the superintendent's office. At the end of each week, the foremen could report the total number of units actually produced. Thus, a weekly comparison of units produced and units scheduled for each department would be available. A weekly summary of units for each department could be made out and copies sent to the departments. It was proposed that the following information be incorporated in this weekly report:

Units produced in corresponding week last year;
Units scheduled for the week just past;
Units produced for the week just past;
Total units produced last year up to corresponding week;
Total units scheduled for year to date;
Total units produced for year to date.

With this report, it would be possible for the superintendent of production to see at a glance whether each department was running behind or ahead of schedule. If entries were not made in terms of a single unit, the superintendent would have to compare the actual production and the scheduled production for each of the 250 items. Such a comparison could give no clear-cut indication of whether production on the whole was excessive or inadequate. If the proposed unit were established, sales could be converted into units from the record of shipments made out in the shipping department and compared with the summary of total units produced by the plant. This comparison would indicate whether the proper relationship was being maintained between production and sales. If original estimates of production appeared to be excessive or inadequate, the schedule for the succeeding period could be revised accordingly.

If the company added new products after the level of wages changed, it would be necessary to determine the labor costs of these new products at the wage levels existent when the standards first were established, in order to keep production records in comparable terms. A more serious objection to the proposal was that although it would give total production in comparable terms, it would not give the actual quantity of each item produced. Thus, although a department might produce its scheduled number of units, a shortage might occur in one item and an oversupply in another. To provide control over the distribution of a department's production among the various items it produced, a supplementary record sheet was needed for each individual item. The unit suggested for these records was the number of gross. On these records, sales for the current and for the past year, as well as scheduled and actual production, could be summarized by periods.

The production superintendent decided to convert all production in the bottling and packing departments into units on the

basis suggested and to establish the supplementary record of individual items.

COMMENTARY: The significant features in this case are:

1. That both day- and piece-work were in use;
2. That changes in the wage level occurred, with a resulting effect upon both day- and piece-work earnings and costs;
3. That the measurement must be secured both for total production and for each of 250 items.

The essential problem deals with selecting a basis for the measurement of total volume for each of the two principal groups, since it must be assumed that a supplementary statistical report for each item would be necessary in any case.

For securing this measurement of total production, the management decided that a suitable common denominator for reducing production to a comparable basis was labor cost—1 cent of labor cost in an article representing one unit.

Numerous objections to using labor or other costs as bases of measurement in situations similar to this have been pointed out.² One of the principal objections to labor costs is the necessity of revising standards every time there is a change in wage levels or in piece-rates. A point should be made in such cases of selecting a basis which, all things considered, will be as permanent as possible, so that revisions will be reduced to a minimum. There have been, from time to time, numerous suggestions made as to the best basis to use in such cases, but many of them have the same inherent lack of a permanent foundation.

Since cost is the result of multiplying time, or pieces produced during a given time, by the workman's rate per hour or per piece, it would seem only logical that the permanent element—time—should itself be used instead of the product of time multiplied by wage-rates. Provided that each task is suitably standardized, it is evident that time can be made to serve as a measure that will give everything which cost will give and, in addition, will have the great advantage of remaining free from the effects of the ups and downs of business and of wages. Obviously, the time required to process any one unit may vary with changes in production technique or tools. Such changes, however, are more readily recognized than are their effects upon wages. In the present case, consequently, it seems that time as a standard would have been preferable to labor cost.

April, 1926

H. H. F.

² See Farquhar, Henry H., "Measuring the Performance of the Production Department," *Harvard Business Review*, April, 1923, Vol. I, No. 3, pp. 331-341.

CLANLEY INK COMPANY ¹

MANUFACTURER—INKS AND ADHESIVES

PRODUCTION PLANNING—*Extension of Period of Time Covered by Advance Planning.* A company manufacturing inks and allied products planned its production schedules for three weeks in advance in quantities of each item, giving weight to sales in the previous year and quantities of finished and unfinished stocks on hand and on schedule. Because that system did not prevent numerous shortages of finished stocks nor provide ample time for meeting labor requirements, the company devised a planning method, aided by charts, which would permit scheduling production by items for longer periods of time.

PRODUCTION CONTROL—*Charts Used to Aid Enforcement of Production Schedules.* A company manufacturing inks and allied products operated a number of separate departments, each under the immediate control of a foreman. The production manager, in order to improve his general control of production and inventories of finished and unfinished products, decided to install departmental charts showing, by items, planned sales for the current year and production scheduled according to 4-week periods for the coming 12 months.

PRODUCTION PLANNING—*Inclusion of Sales Forecasts in Production Planning.* A company manufacturing inks and allied products, when it lengthened its period of planning production by items, decided that use of past sales as a factor in planning should be augmented by the inclusion, among its planning factors, of currently corrected forecasts of sales for the next 12 months.

(1924)

In December, 1924, the production superintendent of the Clanley Ink Company sought to improve his method of planning and scheduling production, in order that the inventory of manufactured stock might be decreased and shortages prevented.

The company, located in a western city of medium size, and employing 220 workers, manufactured inks and adhesives, and inked carbon papers, typewriter ribbons, and stamping pads. All items were produced for stock. The total production was divided as follows: inks, 45%; adhesives, 30%; carbon papers, typewriter ribbons, and stamping pads, 25%. When the various types of product and the various sizes of jars, bottles, and tubes in which the inks and adhesives were packed were taken into consideration, the total number of items of manufactured stock was approximately 500.

The production department was under the control of the

¹ Fictitious name used for purpose of disguise.

treasurer, who was also general manager. He also was in charge of the purchasing and accounting departments. The production superintendent determined the quantities to be manufactured and routed and scheduled the manufacturing orders. An assistant and three girls were employed in his office.

For administrative purposes, the plant was divided into two major divisions; one manufactured inks and adhesives and the other, inked carbon papers and typewriter ribbons. Each of these major divisions was subdivided into manufacturing and finishing departments, with one foreman in charge of all manufacturing in a division and another in charge of all finishing. The laboratory chief on the fourth floor controlled the quality of the products. An inspector under the production superintendent supervised the bottling, labeling, and packing operations.

The company's plant was a four-story building with a storehouse annex. All initial manufacturing took place on the fourth floor of the factory and all products were stocked on the third floor preparatory to the finishing operations.

The raw materials from which the ink was made were mixed in large tanks on the fourth floor. From those tanks, the ink was conducted by gravity conveyance into large storage vats on the third floor. After it had remained in the vats long enough for all sediment to settle, the ink was siphoned to filling machines on the second floor. Paste and mucilage also were made in tanks on the fourth floor and were stored on the third. The coating for carbon papers and the inks with which the typewriter ribbons and stamping pads were saturated were mixed on the fourth floor. Carbon papers were coated and dried by a machine into which were inserted rolls of paper from 3 to 4 feet wide and 18 inches in diameter. The rolls were sent to the third floor for storage. Typewriter ribbons were slit into the proper widths and saturated with ink on the fourth floor and were stored on the third floor. Stamping pads were inked on the fourth floor in a separate department.

In addition to the space provided for the storage of inks, adhesives, carbon papers, and typewriter ribbons, the company provided storage space for manufactured stock, box shooks, corrugated cartons, bottles, labels, corks, stoppers, and brushes. Box shooks were stored in the basement of the factory and were made up by machine. The boxes, without the tops, were deliv-

ered by a vertical conveyor to the bottling room, which was on the second floor of the factory. Bottling supplies were delivered from the storehouse annex by hand trucks.

Ink was bottled and corked by automatic filling machines and labeled by hand or by machines tended by girls. Adhesives, before being bottled or encased in tubes, were heated to a smooth-running liquid condition and delivered through rubber tubes from storage vats to girls who filled the containers. Nozzles at the ends of the tubes enabled the girls to control the flow of material into each container. The containers were corked and labeled, either by automatic machines or by hand.

Carbon papers were slit into the widths specified on manufacturing orders and cut into the proper lengths by one machine. Typewriter ribbons also were cut in the lengths ordered. All products were packed into boxes and cartons by hand. The boxes were nailed up by machine. All equipment on the bottling floor was laid out around a continuous conveyor 382 feet in length, which carried empty bottles, filled bottles, bottles with and without corks or labels, stamping pads, finished products such as carbon paper, and uncovered boxes packed with the finished products. The employees took out what they required, performed the operations assigned to them, and slid the product back onto the conveyor. After the boxes had been nailed up, they were placed on a spiral conveyor which delivered them to the shipping room on the first floor or to the manufactured stock-room in the basement.

Upon the receipt of a manufacturing order, as for a certain ink, the quantity of the product specified in the order was taken from the bulk stock on the third floor, and manufacturing to replenish that stock was begun. As a result, bulk ink always was in stock to fill future manufacturing orders. Manufacturing orders scheduled the assembly, on the second floor, of the product; the bottles, jars, or tubes; the corks or stoppers; the brushes; and the boxes in which the product was to be shipped.

The manufacturing orders were scheduled three weeks in advance. The orders were dispatched by the departmental foremen, who were directly responsible to the production superintendent. Each week, the production superintendent, in conference with the foremen of the departments and the "manufactured stock clerk," revised and extended the schedule.

The production superintendent kept records in his office of the sales by items for each 4-week period of the previous 12 months' period. The records of each item were kept on a separate tabulation sheet. At the top of the sheet, provision was made for stating the account number of the item, the quantity most economical to manufacture at one time, and the quantity on hand at the beginning of the year. The following information for each period of the current year was arranged in columns in the remaining space: the period of the year, the sales of the corresponding period of the previous year, the sales of the period of the present year, and the quantities produced. All information was totaled cumulatively to date.

The factors taken into consideration in the determination of the schedule were the sales of the previous year, the quantities of the bottling and packing supplies on hand available to fill manufacturing orders, the work ahead of the finishing departments, and the quantity of finished merchandise in stock.

Near the close of each year, but before the annual physical inventory of manufactured stock was taken, the production officials estimated, for each producing department, its total sales and manufacturing requirements for the coming year. Allowances were made for any expected surplus or shortage in the inventory of manufactured stock. After the manufactured stock inventory had been taken, estimates were made of sales of each item in each department. The manufacturing requirements for these estimated sales were determined on the basis of any actual surplus or shortage found in the inventory. These detailed estimates were expected to agree closely in total with the original estimates made before the inventories were taken.

Although the company in this way forecast the sales for each year, and the manufacturing requirements needed to maintain the stock of finished goods, in practice special production orders frequently had to be made out during the year as a result of actual shortages reported by the finished stock clerk. These "short" production orders had to take precedence over others, provided there were materials available for them.

No perpetual inventory records of manufactured stock were kept, but the manufactured stock clerk, by periodical visits to the stock-room and his knowledge of the approximate quantities

necessary to be kept in stock, was able to detect those items that were short.

The accounting department kept perpetual inventory records of all supplies. Those records showed the quantities on hand, the quantities used, the quantities reserved for manufacturing orders, and the quantities available to fill future orders. When the supply of any item reached the minimum allowed, that department sent a requisition to the purchasing department. The shortages were listed once a week and the lists sent to the production superintendent so that he would schedule no orders for which there were not sufficient supplies.

The foremen dispatched the work scheduled within their own departments and were able, from their knowledge of the work ahead, to tell the superintendent how many more manufacturing orders would be necessary to complete the three weeks' production scheduled.

The company's plant capacity was more than sufficient to produce the maximum quantities that ever had been required at one time by the branch warehouses and wholesalers. The foremen hired or released workers after the schedule had been planned. Occasionally the foremen had difficulty in increasing the force, which was composed mostly of semiskilled workers.

In order to improve the control of production and inventory, in December, 1924, the production superintendent developed a system of control charts, as illustrated here by Exhibit 1. These charts would represent the current schedules. The production superintendent believed that if the production schedules were prepared a longer time in advance they would afford better inventory control and would be of more assistance to the foremen in planning operations. The schedules were intended to provide for control over manufacturing and purchasing, and to represent a theoretically even flow of production throughout the year.

A chart was made for each department. Across the top were listed the item numbers and down the left side were listed the 13 four-week periods of the year. Just under each item number were listed the estimated yearly sales in units of quantity. As production of any item was ordered, a line was drawn down the item column a distance commensurate with the proportion which the amount ordered was of the yearly sales estimate. For

Item Number	1	2	3	4	5	6	7	8	9	10	Department A Totals
Estimated Sales	10,000	2,000	7,000	4,000	1,000	12,000	9,000	5,000	15,000	11,000	76,000
4-Week Periods											
1			500								
2			1000								
3								500			
4	3000					3000					
5							3000				
6											
7	5000					6000			7500	5500	37,000
8											
9							6000				
10		1500		3000							
11											
12											
13					1000						

Exhibit 1: Production control chart of Clanley Ink Company.

example, item Number 6, as shown on Exhibit 1, had an estimated yearly sales volume of 12,000 units. To date the total production ordered was 6,000 units. Therefore, one-half the year's manufacturing requirements had been met and the line was drawn to the middle of the seventh period. A glance at this chart showed immediately the likelihood of running short of any item, provided the sales estimates were not faulty. Sales estimates and the length of the lines were corrected currently from notices of changes in sales plans given the production manager.

With the aid of the control chart, it was possible to plan manufacturing orders eight weeks in advance. Meetings of the factory manager, finished stock clerk, and foremen were held bi-weekly. At the first meeting of each four-week period, the requirements for the following eight weeks were determined. The needs of the finished stock clerk were discussed first. If a shortage seemed likely, the foremen were given such orders as

had been made out, but which had been held because of shortages of materials. Such orders usually were not released, however, until the production manager's assistant received notice from the accounting department that the materials were available, or had been promised for delivery at a definite time. Thus the foremen could plan the detailed execution of all orders delivered to them, with assurance that the needed materials would be available. The office of the production manager was responsible for making possible an even flow of work in process. Shortages of finished stock usually occurred chiefly from receipt of some unexpected large foreign order for items seldom called for in great quantity by domestic customers.

After the discussion of means of avoiding possible shortages, the foremen reported as to whether they had orders enough on hand to keep their departments running throughout the future period under discussion. The foremen's answers could be challenged if they seemed unreasonable on the basis of known productive capacity and the entries on the control chart. When it was agreed, however, that more orders were needed, the production manager decided what items to order into production. These items, plus those needed to meet stock shortages, were listed on a "manufacturing stock needs" sheet. Rush items were so recorded. These sheets were analyzed and lists made of all materials needed. The lists went to the accounting department clerks in charge of the balance-of-stores cards, who checked the availability of materials. The lists then were returned to the office of the production manager, where production orders were made out and issued to the foremen. At the same time, the proper entries were made on the control chart. Usually, no production order was issued until the analysis sheet showed that all necessary material would be available when wanted. Production orders to meet stock shortages were given immediate attention by the foremen. Other production orders were laid aside until the specified time for starting work on them.

The second meeting of each four-week period was merely supplementary, for the purpose of making any corrections in the scheduled orders which unusual fluctuations in the business had caused in the meantime.

After operating on this plan of control for about a year, the production superintendent found that the percentage of rush

production orders to planned production orders had decreased materially. The future planning for a longer period, which the control charts aided, gave the balance-of-stores clerks early notice of needed revisions in maximum and minimum limits. The purchasing agent was enabled to place contracts for materials to be delivered on schedule in smaller quantities. The foremen were enabled to build up or to decrease their working forces more intelligently. The general result was smaller inventories and fewer shortages in spite of a larger volume of business.

The production manager expected to improve the control methods as need or opportunity arose. At the end of a year and a half, the system had eliminated "short" orders almost entirely; production was well ahead of sales, and the inventories were satisfactorily small.

COMMENTARY: The charts worked out by the production superintendent in this case were undoubtedly a step in the right direction, and might well have accomplished all that was claimed for the system. Any rational means by which future plans may be crystallized and recorded usually are well worth their cost. Furthermore, it is desirable that such means be in graphic form, as in this instance.

There appear to have been, however, three limiting factors to the successful solution of this problem of control of inventory. (1) The perpetual inventory of raw material was kept in the cost accounting office, from which weekly reports were made to the production superintendent. Such an assignment of this function is questionable from the practical standpoint, since such weekly reports increase the possibilities of inaccuracies in furnishing a sufficiently sensitive control of raw-material shortages. (2) No inventory records of finished stock were kept. This, in view of the practice of shipping from stock, would seem to be a serious omission, although perhaps such records were made temporarily unnecessary by the presence of an experienced and capable stock clerk. (3) A questionable degree of reliance on matters pertaining to future planning was placed on otherwise busy foremen. It is reasonable to suppose that the foremen did not have continuous information as to orders received, raw materials and finished stock on hand, and changing sales trends, sufficient to enable them to correlate quickly and accurately these various elements, which, taken together, furnish means of securing the desired control.

The eventual successful solution of this problem, therefore, would appear to require, in addition to the control charts as developed, a responsive contact between raw-material inventory and production offi-

cials, a current record of manufactured stock on hand, on order, and available for shipment, and a central correlation of all production information with sales demands and trends.

June, 1926

H. H. F.

JACKSON FILE COMPANY ¹

MANUFACTURER—STEEL FILES

PRODUCTION CONTROL—*Establishment of Centralized System of Control.*

Because of lack of coordination in raw-material purchases, in production of basic parts, and in production of finished product, the company, which manufactured a wide variety of steel files for stock, frequently was unable to fill customers' orders, although having idle equipment and excess stocks of various items. The company, therefore, decided to establish a system of control which provided for the scheduling of basic parts and finished product for a year in advance and also for a careful follow-up of work on the basis of the schedule.

PRODUCTION CONTROL—*Scheduling Work Ahead of Machines.* In order to improve its control of production, the company, which manufactured steel files, decided to schedule the hours of work ahead of each class of machines. These data were to be reported currently on a factory planning board.

(1918)

In 1918 the Jackson File Company, because of difficulties it had been having in making a satisfactory division of production among the various kinds of files which it manufactured, was in need of a suitable system of production control.

The Jackson File Company employed about 300 people in its plant. The company manufactured files of approximately 1,000 sizes and shapes. These were made to stock so that, in many instances, orders from customers could be shipped as soon as received.

The chief raw material used in the manufacture of files was steel, which the company bought in sizes varying according to the size of file to be made. Approximately 200 sizes and kinds of steel were required for the files which the company manufactured. The purchasing for the plant was done by the plant superintendent. He made estimates of what he thought the plant could produce during the year for the various sizes and kinds of

¹ Fictitious name used for purpose of disguise.

files and made steel purchases accordingly. He placed orders for steel once or twice a year.

The making of a file involved two major operations: forging the blank from the raw stock, and cutting. A blank of a given size could be used for any one of from three to eight kinds of files. The blanking process required six different machine operations, and the cutting process from eight to ten machine operations.

The machinery in the factory was highly specialized, but a given machine, such as a cutting machine, could be used on from 4 to 6 sizes of files. The range of files that a given machine could work on could be increased by the addition of attachments to the machine. The Jackson File Company had 200 machines of 30 kinds.

As soon as raw steel stock was received at the plant, it was as a rule ordered into process and forged into blanks of the sizes to which it was suited. Work on such an order would extend through a period of from one week to six months, depending upon the size of the shipment of steel received. The blanks were put into stores as completed.

Manufacturing orders for finished files originated with the clerk in charge of the finished files storeroom. A stores card was kept for each size and kind of finished file, with the following headings: "In Process," "In Stock," "Shipping Orders For." If, for example, a shipping order for 1,000 dozen 8-inch mill bast files was received, the stores clerk would look on his stores card for these files. He might find that 300 dozen were in process and 200 dozen in stock, or a total of 500 dozen that could be applied against this order. He then would issue a manufacturing order to cut from blanks enough files to supply the shortage on the order in hand, plus whatever quantity he thought advisable to keep in stock.

This method of purchasing raw material and ordering work into process, because it made no provision for preserving a proper balance between the kinds of work in process, had resulted in excessive stocks of blanks for files for which no orders were received, and in much idle equipment. Investigation showed that for some kinds of files enough blanks had been forged to last three and four years, and that certain classes of equipment were idle at least 20% of the time. This condition existed in spite of

the fact that the company was receiving more orders for files than it could fill.

In 1918, therefore, the management authorized a member of the organization to install a system of control which would overcome the defects of the existing system and which would increase the total production of the plant. The company wished to keep costs of control at a minimum.

The executive selected for this work first learned the number made of each size and kind of file over a period of years in terms of percentage of total production. He found that this percentage for a given kind and size of file was fairly constant from year to year, and also that 90% of the company's output was of 90 sizes and kinds of files; and 10% of the remaining 910 sizes and kinds. He compared the manufacturing costs and profits on the different sizes of files with the percentages of output for the corresponding sizes.

He then tabulated for each machine in the plant and for each operation performed there the rate of output per hour. These figures he arrived at by making time studies and by comparing the results of these studies with the past production records of the most capable men in the shop.

On the basis of the percentages which production of the various files had borne to total production in the past, and on the basis of the rates of output for the various machines and operations, the executive prepared a master schedule for the ensuing year. This schedule allowed for an increase of 33% in the total output of the plant. The schedule specified weekly rates of production for all sizes of blanks and for all sizes and kinds of finished files made from these blanks. Manufacture, therefore, was to continue on a stock basis.

The executive then drew up a control card for each size and kind of finished file. This card was so arranged as to make the following information available at all times:

- Weekly rate of production as specified on the master schedule;
- Total number of files started into process to date, since the beginning of the year;
- Total number of files in process at each of the major operations;
- Total number of files finished to date, since beginning of year;
- Total number of files in stock-room;
- Orders received to date, since beginning of year;

Shipments to date, since beginning of year;
Unfilled orders.

All information on these control cards was expressed in terms of dozens of files and, also, in terms of weeks of work. Thus, if there were on hand unfilled orders for 1,250 dozens of a given size and kind of file, and the master schedule called for a weekly production of 100 dozens of this file, the card would show that there were unfilled orders on hand for 1,250 dozens, or an equivalent of $12\frac{1}{2}$ weeks' work.

The control cards were kept in a visible file in a small room adjacent to the superintendent's office. The visible part of the card, as the card lay in the rack, showed the kind and size of file for which the card was kept, the total production of that file to date in terms of weeks of work, and the scheduled production of that file at that date in terms of weeks of work. Actual and scheduled production figures were shown by means of a scale representing the weeks of the year and two tabs which were placed on the scale at the proper positions. If actual production was behind scheduled production, the visible tab for actual production was red; if actual production was equal to or in advance of the schedule, the visible tab was black. Therefore, by simply glancing over the rack containing the 1,000 cards representing the 1,000 kinds and sizes of files made, those responsible for production could see on what files production was behind schedule, and how many weeks behind.

The rack of control cards was kept posted to date, both as to figures and as to the location of the tabs, by one girl, who spent about two hours a day on this work. Each day she made a list of files which were behind schedule, and another list of files for which new production orders should be issued. Both of these lists were sent to the superintendent. Copies of the list showing the files behind schedule also went to the foremen in the shop. The list of files for which production orders were to be issued, after being approved by the superintendent, was sent to a clerk who made out the following forms:

1. Lot cards, which acted as move tickets, and accompanied the lots through the factory;
2. Time tickets, one for each operation necessary on each lot;
3. Cost cards, one for each lot;
4. Progress cards, one for each lot.

The lot cards were either white, green, or red: white for an ordinary stock order; green for an order to apply on a shipping order already at hand; and red for a special rush order.

The time cards showed the lot number, the size and kind of file, and the operation to be performed. These cards were sent to the departments where the work called for was to be performed. In each department there was placed a board upon which was listed the name of each man who was working in that department. Underneath each name were three sets of clips: the top clip was to hold the time card for the work on which the man was employed at the time; the second clip was for the time card for the work which he was to begin next; and the third clip was for time-cards for all the other jobs scheduled for that man. A time clock was placed in each department. The foreman was responsible for seeing that each worker always had enough work ahead of him. Time cards were not sent to a department until the lot called for on the cards actually had arrived in that department so that work could be begun on the lot at any time.

The progress card for a lot was a printed card giving the size and kind of file, the lot number, and the operations to be performed on that file. A clip was put on the card over the first operation listed. As work on the lot progressed, this clip was moved from one operation to another, so that at all times it was evident what operation was being performed on that particular lot. Information needed for the moving of this clip was obtained from the time cards as they were returned to the office. The color of the clip corresponded to the color of the lot card which accompanied the goods through the factory; that is, the clip was white, green, or red, depending upon whether the lot was for stock, for a shipping order on hand, or for a special rush order. The rack of progress cards was kept on the wall in the room adjacent to the superintendent's office, in which the control cards also were kept. Both the control cards and the progress cards were accessible to the foremen. The location of any lot in the factory and the nature of the order which the lot was to fill could be determined easily by means of the progress rack. By reference to the control card for the files of the kind and size specified in an order for a particular lot, the record of the manufacture of that kind and size of file since the beginning of the year and the relation of actual production and that required by the master

schedule could be determined. The rack of progress cards was posted once a day, in about one hour's time.

By means of this system, and without the addition of a single indirect employee, the production of the Jackson File Company was increased in the period from 1918 to 1920 by 100%. The manager was convinced, however, that production could be increased still more if additional control records were kept.

The manager pointed out that the system of control which the company had adopted provided no record of the volume of work in terms of hours ahead of each machine or class of machines. Such a record should show whether a given class of machines was idle, or whether more work was scheduled for it than it was capable of producing within the required time. The record would assist in the maintenance of a proper division of work among departments.

The company decided to install a board on which the classes of machines, grouped according to the kinds of files that they could produce, were listed vertically. Two clips were placed to the right of the listed name of each class of machines, one above the other. One clip was to hold time cards for all work ahead of that class of machines and ready to be worked on. Beside that clip was a string, which could be drawn out horizontally to any length desired. The length of the string was adjusted daily to show the total number of hours' work represented by the cards in the clip. The second clip contained the time cards for all work scheduled for that class of machines in the factory but not yet ready to be worked on. An adjustable string also was placed to the right of this second clip, to indicate the total hours' work represented by the cards in that clip.

COMMENTARY: The reasons given for the additional control installation in terms of machine classes were that it would "show whether a given class of machines was idle, or whether more work was scheduled for it than it was capable of producing within the required time." Also, "the record would assist in the maintenance of a proper division of work among departments."

Now each of these responsibilities would appear to have been properly assumed in the original control if conditions were as stated. The lack of complete versatility in the equipment justified a certain minimum of idleness of machinery, if a correct balance of diversified output was to be maintained. Again, a proper master schedule in terms

of weekly production would not assign work to equipment beyond its capacity. Finally, a division of work among departments should automatically follow the assignment of work to machines which the original master schedule contemplated.

It is assumed, therefore, that some variance in conditions from those originally anticipated was met with. It is clear that the master schedule as originally laid out did not tax the productive equipment to capacity inasmuch as it called for an increase of 33% in the total capacity of the plant, whereas it is stated later that by means of this system, production was increased 100%. We note also that the original plan allowed for the production of goods on a basis of stock orders, shipping orders, and special rush orders. It is probable that the last two types of orders constituted demands for production over and above the requirements of the master schedule, which doubtless was in terms of stock requirements. Excess equipment in the early stages of operation would allow executives to introduce these shipping and special orders into production without difficulty, but as the stock requirements increased, this plan could be continued no longer and excess loading had to be avoided through some form of machine capacity control.

The case gives us, however, no basis for justifying the addition of this control in order to reduce idleness of equipment or to allocate work to departments.

May, 1926

E. H. S.

LEON SHOE COMPANY ¹

MANUFACTURER AND RETAILER—SHOES

SALES VOLUME—*Price and Style Policies to Increase Sales.* Sales were decreasing, and the company, which manufactured shoes of medium and high quality and sold them through its own retail stores and through exclusive agents, decided that it was necessary, in order to increase sales, to reduce the price of the shoes without making a corresponding reduction in quality. As a means of effecting production and sales economies, the company reduced the number of styles which it manufactured from 2,500 to 100 and established a single retail price, lower than the former average price, for all shoes sold in its stores. The company's plan was successful in increasing the sales volume, although all sales to exclusive agents were lost.

MANUFACTURER'S RETAIL STORES—*Sole Distribution of Product Through.* A company which manufactured shoes and sold 50% of its production through its own retail stores and the remainder through exclusive agents decided to reduce the number of styles which it manufactured from

¹ Fictitious name used for purpose of disguise.

2,500 to 100 and to establish a single price, about 20% lower than the average price previously charged, for all shoes sold in its retail stores. Although the company made no effort to induce the exclusive agents to observe the single price, they refused to continue to sell the company's shoes, objecting both to the reduction in styles and to the low price, which, even though they did not have to observe it, probably would interfere with their sales at higher prices. After the company's change in policy, sales in its retail stores increased 100%.

(1922)

The Leon Shoe Company produced men's and women's shoes of medium and high quality and sold them through retail stores which it owned, and through exclusive retail agents. The company's annual sales volume averaged about \$5,000,000. As a result of the business depression in 1921, a marked decline occurred in the company's sales in that year, and at the beginning of 1922 it became evident that if sales were to be increased some change in policy was necessary. The proposal was made to the president that the number of styles manufactured be reduced and a single retail price established for all the shoes.

The Leon Shoe Company had been established in 1893 as a retail store selling one quality of shoes at a uniform price of \$3 per pair. Before 1900, four more stores had been established and additional grades of shoes included to sell at \$4 and \$5 per pair. In 1900 the company had been consolidated with a shoe factory the total production of which had been sold thereafter through the retail stores. In 1907 exclusive agencies had been established for Leon shoes in localities where the company had no retail stores.

After 1907, additional retail stores had been established and the number of exclusive agents increased, until, in 1921, there were 60 retail stores and 1,100 agents. The company's sales were divided about equally between the stores and the agents. A majority of the agents sold no brand of shoes except the Leon, but sold other types of products. For example, the agents selected for men's shoes usually were retailers of men's clothing and haberdashery. The company appointed no agents in cities in which it maintained retail stores.

Salesmen called on the exclusive agents twice a year with samples and took orders for the ensuing season. The company produced about 2,500 styles of shoes, of medium, medium high, and high quality, and each agent selected the styles which he believed

were best suited to his clientele and territory. The company also permitted the managers of its retail stores to select the styles and qualities which they preferred. Retail prices in the company's stores were the same as those established by the exclusive agents. In 1920 Leon shoes were sold for 22 different retail prices, ranging from \$7.50 to \$18 per pair; the average price was about \$11.50 per pair.

The company reduced the prices of its shoes in 1921 so that the average retail price was about \$8.50 per pair. No increase in sales resulted, however, and it became evident to the president that sales could be increased only by a further reduction in price without a corresponding reduction in quality. This could be accomplished only by a reduction in the costs of manufacture and distribution. The plan proposed to secure these results provided for a reduction in the number of styles from 2,500 to 100, all the styles to be of approximately the same quality. Those styles were to be retained which had been the most popular in the past. The plan provided also that, as a means of effecting further economies of operation in selling, the company adopt a single-price policy for its retail stores. A price below \$7 per pair was recommended as one that would appeal to the large class of purchasers of medium quality shoes. The plan called for an increase of 50% in the advertising appropriation for the remainder of 1922. The advertising was to feature the single price, and the new policy was to be characterized in the slogan "One Profit, One Quality, One Price." No direct efforts were to be made to induce exclusive agents to sell at a single price.

In order to determine a retail selling price, the company made preliminary estimates of costs, taking into consideration expenses of manufacture and distribution and expected increases in the sales volume. Although the costs of the various styles of shoes were not uniform, a satisfactory average gross margin of profit could be realized from a single retail price if that price were determined on the basis of the proportions which the sales of the various styles bore to total sales. The retail price recommended, selected on the foregoing basis, was \$6.80 per pair.

The chief objection made to the adoption of the plan was that it probably involved loss of sales to exclusive agents. The agents wanted a large number of styles from which to select, so that they could order styles which represented their conceptions of

what could be sold most readily to their clientele. It was likely that the agents would find it impossible to secure the desired variations among 100 styles. Even if the agents continued to order from the reduced number of styles, they were likely to object to the one-price retail selling policy. The company's trade-mark was well known throughout the United States, and the agents would have difficulty in securing a higher price than that asked by the company's own stores.

In order to realize a satisfactory gross margin at the uniform price of \$6.80, the agents would have to select styles at the various costs carefully and exercise added control over stocks so as to increase stock-turn. It was asserted that few of the agents had the ability to make adequate profits selling at one price and that most of them would be unwilling to make the effort. If the exclusive agents refused to continue to sell Leon shoes, the company's sales volume would be reduced one-half and an unprecedented increase in sales in company stores would be necessary in order to compensate for the loss. If discontinuance of the agencies resulted from the adoption of the plan, furthermore, the morale of the junior executives of the company would be injured, because the company, during the 15 preceding years, had concentrated upon the development of sales through exclusive agents.

The managers of the company's stores also were likely to oppose the suggested changes; they preferred a wide selection of styles and a varying scale of prices, in order to be able to appeal to all classes of purchasers. Complete cooperation from the store managers was necessary for the success of the plan. In addition to the probable loss of sales to agents, establishment of a single-price policy would involve an immediate loss through markdowns on inventories in the company's retail stores.

The company knew that many production economies could be realized if the plan were adopted. Under the existing method, shoes were produced when orders were received; it was impossible to forecast accurately the popularity of each of the 2,500 styles. If the number of styles were reduced, estimates could be made in advance of the proportion of sales of each style of shoe to total sales, and production could be undertaken on a definite schedule. The extra expense for fill-in orders could be eliminated. With 2,500 styles, fill-in orders had to be supplied from

special production orders. On quantities of less than 6 pairs, labor costs were increased by about 50%. If the number of styles were reduced as proposed, fill-in orders could be supplied from stocks. Economies could be secured also in purchasing, for the number of grades and kinds of leather required would be reduced and the requirements would be known longer in advance. Further economies could be secured in the operation of the retail stores. Stocks could be more easily controlled and the loss from end sizes and unsalable styles reduced. The company expected that the physical inventories of the stores would be decreased by about 25% and that increases in rates of stock-turn would result. If sales to agents were lost, the company could concentrate on revising control of the company stores so as to reduce expenses, and on introducing more effective selling methods.

The company believed that the one-price policy would increase sales in the company stores sufficiently to compensate for the probable loss of sales to agents. Because of the reduction in manufacturing and distribution costs, the company would be able to offer a better quality in relation to price than was possible under existing circumstances. When purchasers entered the company's stores, they would be convinced in advance that the single price asked was the amount they wanted to pay. Consequently, no sales to them would be lost because of unsatisfactory prices. Since customers would not have to choose between styles at different prices, time would be saved and clerks could serve a greater number of customers. The company believed that the selection of styles was adequate to satisfy a majority of consumers, and that purchasers would be attracted by the single price, which was low in relation to the quality of the shoes.

The president decided to adopt the proposed plan, and it was made effective in March, 1922. The exclusive agents refused to continue to sell Leon shoes under the changed policy. Sales in the company's retail stores increased, however; by November, 1922, the company's rate of sales was equal to that of January and February, 1922, that is, sales of the retail stores increased approximately 100%. No increase in the stores' expenses accompanied this increase in sales. Consequently, the company's percentage of selling expense was reduced one-half. Sales continued to increase, and the president was convinced that the new policy was highly satisfactory.

COMMENTARY: The successful outcome of the Leon Shoe Company's decision to reduce styles and to adopt a single-price policy for shoes was due to a series of factors:

1. The substantial lowering of prices made possible by economies in production through fewer styles and by concentration of sales in its own stores.

2. The effectiveness of price appeal in increasing sales to compensate for loss of exclusive agencies. The Leon Shoe Company was trading upon a previous reputation for high quality of product, established by advertising, and reflected in the quotation of higher prices.

3. The long experience of the company in managing retail stores.

4. The number of stores which the company then operated rendered it possible to handle the total sales of the company through them. The Leon Shoe Company could avoid rapid establishment of new stores with the dangers involved. Under ordinary conditions, the company would have suffered a very serious setback from the loss of several hundred distributors. The loss was much less serious for the Leon Shoe Company, because one-half or even a larger proportion of its production had been sold previously through its own retail outlets.

5. The reduction in the number of styles was not a reduction which would seriously affect the sales in the company's own stores. The general practice of the shoe trade in furnishing a large number of styles and innumerable variations at the request of retailers is justified only by the exigencies of competitive conditions. It is possible that with 100 styles each retail store of the Leon Shoe Company would be able to offer each customer as wide a choice as he had been accustomed to receive in the past from the average unit retailer.

6. Lastly, conditions favored the increase in sales in the Leon Shoe Company stores, when the change was made. It was, of course, possible by extra sales effort and local advertising to increase sales somewhat even without changing the price. But the change in price and the trading upon a previous reputation for high-grade products at a period when price was even more important as an appeal than usual, were apparently sufficient to make the change in policy successful.

In general, it may be clearly asserted that the change of policy involved assuming a very large risk. The favoring conditions mentioned above indicate the limitations of the Leon Shoe Company's success in furnishing a precedent for other manufacturers.

May, 1926

H. R. T.

LEON SHOE COMPANY ¹

MANUFACTURER AND RETAILER—SHOES

STOCK CONTROL—*Centralization of, in Chain Stores.* A company which manufactured shoes and distributed them through its own retail stores, after adopting a single-price policy and reducing the number of styles which it manufactured, decided to centralize stock control and relieve store managers of much of their non-selling work. The store managers were to do no ordering except in emergencies. The company adopted a centralized perpetual inventory system. Stocks were to be apportioned to the stores by the central office on the basis of a previous sales analysis and current sales reports submitted by the stores. The centralization of control and the changed merchandise policies were successful in increasing sales and profits and in reducing average inventories.

INVENTORY CONTROL—*Centralized System of, in Chain Stores.* After it had adopted a single-price policy in its retail stores and reduced the number of styles which it manufactured from 2,500 to 100, a shoe manufacturing company deemed it practicable to install a perpetual inventory system. The system depended upon the use of stock-control boards fitted with pegs bearing varying numbers of washers to indicate sizes and styles in stock. A master control board was maintained at the factory.

PRODUCTION PLANNING—*Sales Analysis as Basis for Model Production Schedule.* A shoe manufacturing company which distributed its output through 60 company-owned retail stores made an analysis of sales according to sizes and widths for a 10-month period during which 800,000 pairs of shoes were sold. On the basis of this analysis, a model production schedule of sizes and widths was established with consequent reduction in the losses from the accumulation of end sizes and widths.

SIMPLIFICATION OF OUTPUT—*Reduction in Number of Styles in Chain Stores.* A shoe manufacturing company which distributed through its own retail stores reduced the number of styles of men's and women's shoes which it manufactured from 2,500 to 100, and adopted a single retail price. These changes made it possible for the company to install a centralized stock control system. Sales and profits were increased, and average inventories reduced.

ACCOUNTING—*Centralization of, in Chain Stores.* A shoe manufacturing company which distributed its output through 60 company-owned retail stores adopted a system of accounts, whereby, on the basis of information supplied by the store managers, the central office compiled for the stores records of sales daily, of operating expenses weekly, and of profit and loss monthly.

(1922)

¹ Fictitious name used for purpose of disguise.

In 1922 the Leon Shoe Company established a centralized stock control system. Prior to that time, the company, which manufactured men's and women's shoes, had distributed half its production through 60 company-owned retail stores, located in the larger cities of the United States, and the other half through 1,100 exclusive retail agencies, located in cities in which the company had no stores.

As a result of orders for special styles from the exclusive agents and the company store managers, the Leon Shoe Company, in 1921, was manufacturing 2,500 styles of men's and women's shoes. Retail prices, varying from \$7.50 to \$18 a pair, were determined by executives in the factory and were maintained by the company's exclusive agencies as well as by its own stores. Average annual gross sales were about \$5,000,000. The sales of men's shoes constituted 70% of total sales, and sales of women's and children's shoes, hosiery, rubbers, and findings made up the remainder. The company-owned stores also did repair work. The average stock-turn for the company's stores was 1.5 times a year.

In 1922 the company discontinued distribution through its exclusive retail agencies, but retained its 60 company stores. The company also reduced the number of styles of shoes manufactured from 2,500 to 100 and fixed a single retail price of \$6.80 for both the men's and women's shoes. All the company's stores were to be billed at that price. Store managers were not to take any mark-downs. Obsolete merchandise was to be returned to the factory and there sold in lots to companies which specialized in the purchase and sale of such merchandise. As always had been the company's practice, the sales manager would specify the length of time that each style of shoe could remain unsold without being classed as obsolete. Generally, a novelty style was classed as obsolete after it had been in stock for six months, whereas staple lines were not classed as obsolete until they had been in stock for a year or more.

Each store had a manager who was responsible for the successful operation of the store. In addition to hiring employees and supervising the salesmen's activities, the manager placed orders with the factory for stock according to his own judgment, trimmed the windows, and made out sales reports for the home office. Each store employed from two to ten salesmen. In the

larger stores there were also a cashier, wrapping clerks, messenger boys, and porters.

Until 1922 the company had required each manager to keep a set of books in which had been entered sales in dollars and units, the billed price of shoes received from the factory, total store expenses, mark-downs, and inventory losses. Prior to the discontinuance of the company's exclusive agencies, shoes had been billed at wholesale prices. Each day the manager had deposited his cash with a local bank in the name of the company and had sent a duplicate deposit slip to the home office at the factory. At least twice a year, one of the company's traveling auditors had examined the accounts of the stores.

At the suggestion of its accountant, the company, in 1922, adopted the following system of financial records. An "impressed" system of expense accounts was used. Each store manager was given an initial account of approximately \$300, from which he met all expenses, including his salary and the salesmen's salaries. Each store manager kept a daily record of his store's expenses, and each week sent an expense statement for his store to the home office. After the statement of expenses had been audited, a check was forwarded to the store manager sufficient to reimburse his fund for the week's expenditures. The managers mailed daily duplicates of all salesmen's sales checks and of all bank deposit slips to the accounting office at the factory. The sales checks showed the size and style number of the shoes sold, the date of sale, the salesperson's number, and the selling price value of each sale.

A little later the home office revised its system of accounts still further. The duplicate sales checks received from the stores were sent daily to the statistical department to be audited. There a tabulating-machine card was punched for each sales check. From these cards, clerks at the factory computed the total retail value of the daily sales, the number of units sold in each of the following classifications: men's shoes, women's shoes, children's shoes, hosiery, rubbers, and findings, and the value of the repair work done.

The items on each store manager's expense report were entered at the home office weekly on a sheet called "Stores' Operating Expense Statement." This sheet was provided with columns for allowances, discounts to employees, premiums on merchandise,

salaries of managers and office force, salaries of sales force, inward freight and cartage, expense of stock transfers, window trimming, advertising direct, heat, light and power, repairs to equipment, wrapping materials, delivery expense, stationery and office supplies, telephone and telegraph, cleaning expense, free repairs, and miscellaneous.

The amounts shown on the store managers' duplicate deposit slips were entered on the financial books, in the same manner as in the past, and a portion of the balance transferred periodically by draft to the main office.

The company kept for each store a third record, a profit and loss statement. Each sheet provided space for six monthly comparative statements of receipts and expenditures for one store. In the first division, the following information was expressed in units, regardless of style or sizes: sales of men's shoes, women's shoes, children's shoes, hosiery, and rubbers. In the second division were recorded, in dollars and cents, sales of men's shoes, women's shoes, children's shoes, findings, and amount of repairs. The sales in each classification were obtainable, both by dollars and by units, from the managers' daily sales slips. The third division of the individual profit and loss sheets contained information about the cost of goods sold, subdivided by men's shoes, women's shoes, children's shoes, hosiery, rubbers, findings, and repairs. The cost of goods sold was secured from records kept by the factory and the purchasing agent, since store managers did not know the cost of the shoes. The fourth division of the profit and loss statement contained a record of the store's operating expenses subdivided into the following accounts: allowances, discounts to employees, premiums on merchandise, management and office salaries, sales force salaries, inward transportation, expense of transfers, window trimming, advertising direct, advertising indirect, rent, heat, light and power, insurance on merchandise and equipment, repairs to equipment, depreciation of equipment, improvements of leased property, taxes, wrapping materials, delivery, stationery and office supplies, telephone and telegraph, cleaning expense, free repairing, miscellaneous, and inventory over and short. The item, advertising indirect, was an apportioned share of the company's national advertising.

Prior to 1922 each store had taken a physical inventory semi-annually. Neither the home office nor the stores, however, had

kept a perpetual inventory. In estimating the inventories on hand in any of the stores between stock-taking dates, the company had been dependent upon its records, in dollars and units, of shipments to and sales of each store. In 1922, however, the management realized that its change to a standard retail price and its reduction of styles facilitated the installation of a stock control system. The accountant, accordingly, proposed to install a new system of stock records in both the retail stores and the home office.

Before making any changes in its system of inventory control, the company made a statistical analysis of sales for the first 10 months during which the stores sold shoes at the single standard retail price. During that period, the 60 stores sold approximately 800,000 pairs of shoes. Duplicate sales slips were sent to the main office and the data included on each slip were punched on tabulating-machine cards. The cards then were classified by stores and by the sizes and widths of the shoes sold. Thus, when the analysis was complete, the management knew the total number of pairs of shoes of each size and width which each company store had sold during the 10-month period, as well as the total for the company as a whole.

On the basis of the sales analysis, the statistician in charge of the study determined that the company as a whole sold a greater number of size 8C men's shoes than it sold of any other size. For that reason, he used the frequency of sale of size 8C men's shoes as the unit for expressing the number of men's shoes in other sizes sold by the company as a whole. The sales of men's shoes expressed in this way are shown in Exhibit 1. The statistician made a similar analysis for sales of women's shoes. The company proposed to plan its production schedule of sizes and widths on the basis of these analyses.

When the statistician analyzed the sales of individual stores, however, he found that each store's distribution of sales by sizes and widths was quite different from the distribution for the company as a whole. The proportion of shoes of each width required by the stores varied with the sections of a city or of the country. A majority of sales in one store might be of wide shoes, while the sales of another store in another part of the same city might be chiefly of narrow shoes. Exhibit 2 tabulates

HARVARD BUSINESS REPORTS

EXHIBIT I

LEON SHOE COMPANY'S SALES OF MEN'S SHOES, BY SIZES MANUFACTURED, EXPRESSED IN TERMS OF SALES OF MEN'S 8C SHOES—BASED ON 10-MONTH PERIOD

AAA	Size 4 4½	Size 5 5½	Size 6 6½	Size 7 7½	Size 8 8½	Size 9 9½	Size 10 10½	Size 11 11½	Size 12	AAA						
AA											AA					
					1,167	584	41	29	28	29		37	49	182	1,167	1,167
A											A					
					834	50	13	5	4	4		5	6	14	24	834	1,167
B											B					
					389	22	4						4	8	14	584	1,167
C											C					
			26	12	4							3	5	12	389	834
D											D					
			31	13	5							4	10	20	584	834
E											E					
					129	29	11	8	7	8		9	12	18	38	278	1,167	1,167
EE											EE					
	4		5		6		7		8			9		10		11		12

KEY: Figure inserted in each square shows, for the company as a whole, the number of pairs of size 8C sold for one pair sold of size represented by the square.

Example: 26 pairs of 8C sold to 1 pair of 5C.

by widths, the number of pairs of shoes which four specific company stores stocked.

Because the sales in no two stores were alike, the sales record of each store was to govern the number of shoes in the various widths and sizes which that store was to stock. The company made no detailed analysis by styles. The company believed that if the stores were provided with shoes to fit their customers correctly, the salesmen could be relied upon to sell customers one of the hundred styles which each store stocked.

The store managers were to do no ordering except in emergencies. The orders for shoes to be shipped to each store were to be placed by four apportioning experts at the factory under the supervision of the sales manager. One expert was to have charge of the shipments of all women's and children's shoes; another was to have charge of all shipments of one-half of the novelty styles of men's shoes. A third expert was to apportion the remaining men's shoes of novelty styles to all stores, and the fourth expert was to apportion all staple lines of men's shoes to all stores.

EXHIBIT 2

NUMBER OF PAIRS OF SHOES, BY WIDTHS, STOCKED BY FOUR SELECTED STORES OF THE LEON SHOE COMPANY

STORE A Selling Large Proportion of Women's Narrow Shoes		STORE B Selling Large Proportion of Women's Wide Shoes		STORE C Selling Large Proportion of Men's Narrow Shoes		STORE D Selling Large Proportion of Men's Wide Shoes	
Width	Stock in Pairs	Width	Stock in Pairs	Width	Stock in Pairs	Width	Stock in Pairs
AA	304	AA		AA	160	AA	1
A	594	A	59	A	379	A	16
B	745	B	336	B	657	B	177
C	641	C	848	C	866	C	1,036
D	198	D	692	D	413	D	1,737
E	18	E	62	E	30	E	534
Total	2,500	Total	1,997	Total	2,505	Total	3,501

To aid the apportioning experts in their work, the store managers were to submit certain sales reports to the factory. The first of these reports was a weekly size sheet, shown as Exhibit 3, which would give, by sizes and widths, a store's sales during a week. One sheet was to be used for each style.

The stores were to have visible physical inventory controls in the form of two wooden stock control boards, each about 2 feet wide and 4 feet long. One board was to indicate the stock of women's shoes, and the other board, the stock of men's shoes. The surface of each board was divided into 2-inch squares. Each square represented a specific size and width of shoe, the horizontal subdivisions of the board surface indicating width, and the vertical subdivisions, size, as on a size-sheet. In the center of each square was a peg on which was to be placed a washer for each pair of shoes of the specified size and width, irrespective of style, in stock at the store. When shipments of shoes were received at the store, the proper number of washers was to be placed on the appropriate pegs. Every time a pair of shoes was sold, a clerk was to remove a washer. The height of each peg, which was adjustable, would represent the number of pairs of shoes of a particular size and width which should be on hand at all times as determined by the statistician who made the survey, the sales manager of the company, and the manager of the store. The company anticipated that the height of the pegs for any one

SIZE-SHEET																									
Store No. <u>41</u>													Date <u>March 14, 1925</u>												
	2	3	4	5	6	7	8	9	10	11	12	13	1	2											
AA																									
A																									
B																									
II																									
D																									
E																									
EE																									
Stock No. <u>7631</u>													Style <u>Men's Kangaroo Oxford</u>												
													Total <u>23</u>												

Exhibit 3: Weekly report sheet of sales by style, sizes, and widths, submitted to central office by stores of Leon Shoe Company.

store would vary from season to season, according to the growth of the store and changes in business conditions.

The home office was to maintain a master stock control board similar to the boards at the stores. Each peg on the master board would represent the total number of shoes of a particular size and width in all the company's stores, and each washer would represent several hundred pairs of shoes.

The squares on the master control board and on the stock control boards were painted one of four colors: white, yellow, blue, and red. These colors were to enable the company executives and store managers to determine at a glance the frequencies with which a specific size of shoe had been sold during the 10 months' test period. Only those sizes the sales of which had equaled at least 3% of total sales were represented by white squares. Sizes whose sales had been from 1% to 3% of total sales had yellow squares; those whose sales had been from 1/10% to 1% of total sales were in blue, and those which had had sales less than 1/10% of total sales were in red.

When the squares were colored in accordance with the foregoing percentages, it was found that approximately 75.7% of the company's total sales of men's shoes for the 10 months' test period had been of those sizes and widths which were represented by pegs in white squares, namely, sizes 7½B to 9½B, 6½C to 10C, and 6½D to 9½D. Thirteen and eight-tenths per cent of the sales of men's shoes had been of sizes represented by yellow squares, namely, 8A to 10A, 7B, 10B, 6C, 10½C, 6D, and 10D. Ten and three-tenths per cent of the sales had been of sizes represented by blue squares: 8AA, 10½AA, 7A, 7½A, 10½A,

11A, 6½B, 10½B, 11B, 5½C, 11C, 5D, 5½D, 10½D, 11D, 6½E, and 10½E. Two-tenths of 1% of the sales had been made in sizes represented by red squares, which included all widths and sizes from 4 to 12 which were not included in the squares of any other color.

The central office was to maintain perpetual inventory sheets, as shown in Exhibit 4, for each store, by styles.

For each pair of shoes shipped to a store, a vertical stroke was to be made in the square for the correct size and width on the perpetual inventory sheet maintained for that particular store and style. When the store manager's size-sheets were received at the home office, a clerk would cross one vertical mark for each pair of shoes sold. By counting the uncrossed vertical strokes, the perpetual inventory clerks at the factory could ascertain the number of pairs of each style, by size and width, which the store had on hand. A recapitulation by sizes and widths then would be made of total sales, and the numbers of washers on the master control board corrected correspondingly.

Since the statistical study determined the total number of shoes in each size and width which should be on hand at each of the stores, the chief problem of distribution of stocks was the apportionment of shoes to the stores by the 100 styles.

At the beginning of every season, the sales manager and the merchandise manager were to determine what styles the factory should make and the total production of each of the styles for the year. The apportioning of the total seasonal production was to be the duty of the apportioning experts. In general, a style which the sales manager and the merchandise manager expected to be popular for one season would be stocked at each store in sizes represented by the white field of the control board, a style expected to be popular for two seasons, in sizes represented by the white and the yellow fields, and a style expected to be popular for three seasons, in sizes represented by the white, yellow, and blue fields. Only staple styles would be stocked in sizes represented by the red field as well.

The duties of each store manager thus would be limited to the management of his sales force and the general supervision of his stocks. The store managers would call to the attention of the apportioning experts any overstocking or understocking at the stores.

Leon Shoe Company

STORE'S STOCK AND SALES SHEET

Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	Total
Inventory																
Allotments																
AA																
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	9
Inventory					1	1	2	2	1	1	1					
Allotments																
A					1	1	11	11	1	1	1					
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	
Inventory				1	1	2	3	2	1	1	1					
Allotments							2	3	2							13
B					1	11	11	11	1	1	1					
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	
Inventory	1	1	1	1	2	3	3	3	3	2	1		1	1		23
Allotments						2	2	2	2	1						
C	1	1	1	1	11	11	11	11	11	11	1	1	1			
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	
Inventory				1	1	2	3	2	2	1	1					15
Allotments																
D			1	1	11	11	11	11	11	1						
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	
Inventory				1	1	2	3	2	2	1	1					
Allotments							2									
E																
Sizes	5	$\frac{1}{2}$	6	$\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	
Inventory																
Allotments																
Store No. <u>41</u>	Stock No. <u>7631</u>			Description <u>Kangaroo Oxford</u>			Men's			Retail <u>\$6.80</u>			Total Pairs <u>60</u>			

Exhibit 4: Perpetual inventory sheet maintained by central office of Leon Shoe Company.

As a further check on the apportioning experts' work, traveling auditors were to inspect the accounts and stock of each store at least twice a year. When they visited a store, the auditors were to have a photograph taken of the stock control board. These photographs were to be mailed to the main office and the experts' perpetual inventory records checked with the individual stores' records as shown by the photographs of the stock control boards.

The Leon Shoe Company adopted the proposed method of inventory control. As a result of that control and of its new merchandising policy, the company succeeded in two years in reducing its average inventory of shoes 25%. The average retail price, before the change to a single standard retail price policy, was \$11.50. The uniform price of \$6.80 represented a reduction of about 35% in average retail prices. During the two-year period, the company doubled its net sales in units, increased its net profits, and increased its ratio of current assets to current liabilities from 1.79 to 1, to 5 to 1.

COMMENTARY: The general problem presented in this case is that of stock control. Stock control may be defined as an up-to-date knowledge of stocks of merchandise on hand and the coordination of purchases with sales and stocks. Since the Leon Shoe Company was engaged both in manufacturing and distribution, it needed to establish its stock control system for the following purposes: (1) to increase the rate of stock-turn; (2) to minimize losses from obsolescence of merchandise; (3) to simplify production; and (4) to coordinate sales and production.

To meet this situation, the company first made three changes in its merchandising policies: (1) It gave up distribution through exclusive retail agencies and undertook to market its entire output through its own retail branches; (2) it reduced the number of styles of shoes sold from 2,500 to 100; and (3) instead of continuing to use a multiplicity of retail prices, the company undertook to sell all shoes at a single standard retail price.

In addition to these changes in merchandising policies, the company initiated the following control policies: (1) It centralized the accounting for all its retail branches, billing shoes to the stores at retail rather than at cost, using an "impressed" system of expense accounts, and relieving store managers of practically all non-selling duties; (2) on the basis of a statistical analysis of sales, according to sizes and widths, for a 10-month period, it drew up a model production schedule for the

factory; and (3) it established centralized stock control by means of a perpetual inventory system, operated on the basis of daily sales reports from each store, and furnishing information by means of which the central office apportioned shoes for production and for shipment to each store.

The main issue in the case is whether the company was justified in adopting such a completely centralized control system in preference to a plan of permitting each retail store manager to exercise his own judgment in the operation of his store substantially as an independent unit.

The principal objections to the plan adopted by the company are as follows: (1) Little room was left for managers of the company's retail stores to exercise their own initiative in managing their stores according to their own judgment of local conditions, which, as shown by the company's sales analysis, differed considerably for each store; (2) the centralized control system involved the danger of a top-heavy central organization not closely in touch with local conditions, prone to the development of bureaucratic methods and the accumulation of red tape, and likely to increase the overhead expense.

On the other hand, the results of the decentralized control system previously used evidently had not been satisfactory. Because of the divergent demands of the store managers and the independent retailers holding the company's exclusive agencies, the number of styles manufactured had reached a total of 2,500. This large number of styles inevitably resulted in losses on shoes of obsolescent style which could be disposed of only at greatly reduced prices. At the same time, under the decentralized control system, there was an accumulation of unsalable shoes in the end sizes and widths, because there was no adequate coordination between the size and width requirements of the various stores and the size and width production schedule of the factory. Consequently, it appears that the company was justified in making the experiment of establishing a completely centralized control system.

Among the business principles which are exemplified in this case, the following may be noted: (1) In chain store management, centralized systems of accounting and stock control are preferable to decentralized systems. (2) In the merchandising of shoes, a system of stock records in physical units is essential in order to prevent the accumulation of end sizes and widths; to be effective, the data provided by such a system of stock records must be used in the actual ordering of merchandise. (3) Simplification of lines through reduction in variety of styles is advantageous not only in reducing factory costs, but also in simplifying the problem of stock control, in reducing the amounts of stock investment, and in minimizing losses from obsolescence of merchandise.

(4) Merchandise control is facilitated through the close contact with the market made possible by the distribution of goods by the manufacturer through his own retail branches, in comparison with a system of distribution through independent retailers. (5) Analysis of sales according to sizes and widths enables a manufacturer to establish a factory production schedule that will minimize losses occurring from the accumulation of unsalable sizes.

October, 1925

M. P. M.

VINCENT COMPANY ¹

MANUFACTURER—PHARMACEUTICAL SUPPLIES

SIMPLIFICATION OF OUTPUT—*Unprofitable Items Discontinued in Favor of Sales Emphasis on Profitable Merchandise.* The new president of a company which manufactured high-grade pharmaceutical supplies made an analysis of the sales of various items. It was customary in the trade for manufacturers to sell a complete line, although some had begun to specialize on certain items. From his analysis the new president concluded that only 350 of the company's 3,500 items were sold at a profit. At the advice of an advertising agency, he discontinued the unprofitable items and concentrated sales effort on a few of the company's branded specialties for which national distribution eventually might be obtained. Sales did not increase immediately, but three years after the adoption of the new policy the president expressed his satisfaction with the change.

SIMPLIFICATION OF OUTPUT—*Service to Customers Affected by Reduction in Number of Items Manufactured.* A company which manufactured high-grade pharmaceutical supplies and which for 50 years had prided itself on being able to furnish any article requested by its customers, in 1921, reduced the number of items which it manufactured from 3,500 to 350, because only the 350 were profitable. For about a year after this reduction the company's salesmen met with much dissatisfaction on the part of customers. In 1923 sales began to increase, and the company was convinced of the wisdom of its change in policy.

ADVERTISING—*To Increase Sales Volume.* A company manufacturing high-grade pharmaceutical supplies, merchandise which was highly competitive on a price basis, never had advertised because it had believed that physicians would associate advertised pharmaceutical supplies with patent medicines. In 1921 and 1922 the company, influenced by the success of certain advertisers, conducted a newspaper advertising campaign for two specialties at an annual cost of about \$20,000; the company's total annual sales were about \$500,000. Sales of the specialties did not increase. In 1923 the company discontinued newspaper advertising

¹ Fictitious name used for purpose of disguise.

and advertised through circulars and sampling campaigns. This method proved more effective than the previous one.

(1920-1921)

In 1920 an advertising agency which the Vincent Company consulted advised the company to reduce the number of items which it manufactured from 3,500 to 350 and to concentrate sales efforts upon a few profitable specialties.

The Vincent Company, located in a suburb of Chicago, had manufactured pharmaceutical supplies since 1870. The company was conservatively managed and had developed slowly. In 1920 its sales amounted to about \$500,000. The company manufactured 3,500 items, which it sold, by means of traveling salesmen, directly to prescription druggists. It sold principally in Wisconsin, Illinois, Indiana, and Michigan, making a few sales in other parts of the United States. The company prided itself on being able to meet practically every requirement of prescription druggists. The products, which were of high quality, had an excellent reputation among druggists and physicians in the territory of local distribution. Because the company believed that physicians would associate advertised pharmaceutical supplies with patent medicines, it had done practically no advertising.

In 1920 the founder of the company retired. The new president found that the growth of the business had been negligible during the preceding 10 years and concluded that the profits did not justify the capital investment. He made an analysis of sales of various items and found that many items were sold infrequently, annual sales of some amounting to less than \$50. The company had kept no detailed cost statistics, but as far as could be determined it had earned a profit on only 350 items.

Sales of pharmaceutical supplies were strongly competitive on a price basis. The products were perishable, and, if they were not sold soon after manufacture, had to be sold at reduced prices or destroyed. It was customary in the trade, however, for manufacturers to carry a complete line in stock, so that they could meet immediately requirements of druggists in any item. Several manufacturers, however, since about 1915 had begun to specialize in a few products which they could manufacture more cheaply than could competitors.

The company had developed a few branded specialties: a

medicated throat preparation, a throat gargle, a disinfectant, a mineral oil, a baby food, a hand lotion, and a shampoo. These specialties had merit, but the company had placed no special sales efforts on them and their sales had been small. The new president of the company had noted the apparent success of the national advertising of listerine and a few hand lotions. He decided to consult an advertising agency.

The advertising agency, after interviewing physicians and druggists in several cities, recommended that the company reduce its line and concentrate on a few items. A part of the agency's report follows:

The main point is that it has been a fundamental weakness of your business to scatter your efforts and energies over too many items, none of which are leaders, in the big sense of the word, and none of which, with the possible exception of one item, result in a worth-while volume of business. The continuation of this basic policy might bring a few thousand dollars of additional sales on this or that product, but that is not the way to build a really profitable business. The key to the solution of your problem, as we see it, is to build a substantially big volume on a few profit-makers, and thus secure a big amount of net profit. We do not consider it any flight of the imagination to say that you have the possibility of securing a sales volume in the not distant future amounting to \$1,000,000 on a few of your specialties, and the signal success of these specialties and the reputation thus secured among the trade for the Vincent name and trade-mark, would help to increase the sales of your other products.

The advertising agency also stated that most of the druggists and physicians which it had interviewed believed that advertising would not injure the prestige of the company's products. Most of the 350 items selected as profitable could be recommended by physicians and druggists on the basis of proved worth.

A substantial reduction in the number of items manufactured would reverse the company's long-established policy of being prepared to meet every requirement of prescription druggists. Such a reduction, however, would increase stock-turn and eliminate a large number of items sold entirely on a price basis. The company might develop consumer demand for a few profitable specialties through advertising, but many of the specialties with which the company would have to compete were nationally advertised. One department store carried 50 brands of hand lotions, for example.

In 1921 the company decided to reduce its line to 350 items and to place special sales efforts on 5 or 6 of the more profitable branded items for which it might hope eventually to obtain national distribution. For about a year after the company had reduced its line, salesmen met with much dissatisfaction on the part of druggists. The company in 1921 and 1922 conducted a newspaper advertising campaign for two specialties at a cost of about \$20,000 a year. The sales of the two specialties, however, failed to increase. For the first two years after its change of policy, therefore, the company lost money. Sales of the 350 selected items, however, did not decrease, and by 1923 sales began to increase. In that year, the company discontinued the newspaper advertising and advertised through circulars by mail and sampling campaigns. This advertising the company found more effective than newspaper advertising. By 1924 sales of all items were increasing appreciably, and the president of the company believed that the change of policy would result in a sound and profitable growth of the business.

COMMENTARY: The recommendation of the advertising agency to the Vincent Company that it eliminate the unprofitable items from its line and concentrate sales efforts upon a few profitable specialties was plausible. It involved, however, a decision upon the important problem of changing the type of business in which the Vincent Company was engaged. The company would have to give up the idea of furnishing the service of complete lines to druggists, and would aim to sell only the limited number of products which, in past experience, had proved profitable. No data are given to show that the substantial needs of a majority of retail druggists might be met by the reduced line, except as it may be inferred from the company's sales records. As was pointed out in regard to the Pendleton Saw Company,² however, the small amount of sales of any particular product may not warrant a manufacturer's refusing to handle it. He must consider his business as a whole in relation to the service which he has to perform for the retailers of his territory.

On the assumption that the products which the Vincent Company discontinued were needed by druggists, even though purchases were small in amount, it is obvious that some means had to be provided whereby the retailers could procure those products. Any organization offering those necessary products might be in an advantageous position to obtain, at the same time, all the business of the retailers. As a

² Pendleton Saw Company, 1 H.B.R. 235; commentary, 2 H.B.R. 462.

result, the sales of the special items which the Vincent Company retained might be placed under a severe handicap by the failure of the company to offer its customers a full line.

In view of the competition which prevails in the drug trade, there should be room for both types of manufacturers in most territories: those manufacturing full lines and those limiting their production to certain specialties. The manufacturers who continued to produce full lines would be benefited by the discontinuance of the unprofitable items by the remaining manufacturers, since competition among the sellers would be lessened. The increased sales which should result from such a change within the market might turn many unprofitable items into profitable ones. Such a change would mean, however, that the volume of sales of the most profitable specialty lines of the full-line manufacturer might be greatly reduced as a result of the intensified sales activities of the companies specializing on these products.

Should manufacturers with limited lines become too narrowly specialized, their multiplication would establish the need for some assembling agency, such as the wholesaler, to assume those functions which can be efficiently and economically fulfilled by the manufacturer who distributes a full line.

In the case of the Vincent Company, the dissatisfaction of customers was to be expected until buying habits were readjusted. The problem was to conserve good-will and increase it during the period of readjustment, so as to prevent a shift of custom from the Vincent Company on the lines retained. Its success showed that it was able not only to retain its sales of the profitable products but also to increase them.

May, 1926

H. R. T.

MARPLE COMPANY ¹

MANUFACTURER—CARPENTERS' TOOLS

MANUFACTURERS' WHOLESALE BRANCHES—*Established to Secure Distribution of Full Line.* The company manufactured carpenters' tools and similar products. Its line included about 1,500 items. The rate of stock-turn for these goods was so low that hardware wholesalers were not willing to carry the full line. The company, therefore, decided to establish wholesale branches whence to sell directly to retailers. It also contemplated a program for advertising a few tools to consumers for household use.

(1915)

The Marple Company, located in New England, manufactured carpenters' tools and similar products. Its line included about

¹ Fictitious name used for purpose of disguise.

1,500 items, such as hacksaws, screw-drivers, calipers, and drills. Each tool, in most instances, was manufactured in several models. The differences between the models of one tool frequently lay in the weight of the handle, the material of the handle, or in some other slight variation. This variety had been developed in order to cater to the preferences of the artisans who used the tools, and had been featured in the sales arguments of the company.

Prior to 1915 Marple tools were sold to hardware wholesalers for distribution to retailers, but the rate of stock-turn was so slow for this type of merchandise that no wholesale merchant was willing to carry a stock of the entire line of Marple tools in addition to his stock of competing brands. Thus the manufacturer's sales argument of variety to suit every need was tending to be nullified. Competition of tool manufacturers was keen, and the total market for tools among artisans did not appear susceptible of rapid expansion.

In order to render complete stocks of its tools accessible to retailers, the company decided to establish wholesale branches and to sell its products directly to retailers. At the same time it took under consideration a plan for advertising a few tools to consumers for household use.

COMMENTARY: The company proposed to establish wholesale branches and to inaugurate a plan of selling directly to retailers because of the unwillingness of wholesalers to carry the full line of its products in stock. The ground on which wholesalers based their attitude was the slow rate of stock-turn for these goods. The slow rate of stock-turn was the result, apparently, of the great variety of models which in numerous instances differed from each other only in small details; the line had not been simplified. Another cause for the slow rate of stock-turn was the limited market; the demand for tools among artisans was not readily expansible.

In so far as the market among artisans was concerned, the company could not expect to expand the market largely merely by adopting a policy of selling directly to retailers. The lack of demand from wholesalers probably reflected a lack of demand for the full line from retailers, who had not found that the wide variety for selection in the Marple line strongly influenced their customers. Hence, retailers would not be likely to buy directly from the company more freely than they had from wholesalers. There was no likelihood, furthermore, that the

company could carry the full line more economically in its wholesale branches than it could have been carried by wholesalers. Under such conditions of inexpansile demand, the manufacturer was not warranted in establishing wholesale branches to secure full-line distribution. Its problem probably was one of simplification rather than one of full-line distribution.

The proposed advertising program was not aimed at the company's fundamental problem of full-line distribution, for the demand from consumers was to be focused on a few items in the line and the demand from artisans was not likely to be enhanced by the advertising to consumers. It was not probable, therefore, that the rate of stock-turn in the wholesale branches would be increased appreciably as a result of such advertising. After the company had decided to operate wholesale branches, the general advertising, to be sure, possibly might have served temporarily as a stimulus to the sales force and have aided the salesmen in securing audiences with retailers, but that was an incidental result, not a permanent solution of the problem which the company set out to solve.

February, 1926

M. T. C.

DELORIA CLEANSER COMPANY¹

MANUFACTURER—HOUSEHOLD CLEANSING PRODUCTS

ADVERTISING—*Segregation of Advertising and Sales Departments.* Some of the executives of a company which manufactured household cleansing products and which, in 1923, spent \$1,000,000 for advertising believed that advertising was properly a sales activity and suggested that, as a means of relieving the president of duties he was performing in connection with the advertising department and of furthering departmental cooperation, the advertising department be made a part of the sales department. The company, deciding that the duties of the sales manager were sufficient already, that advertising was a specialized field and should be controlled by experts, and that under independent control the two departments tended to balance and supplement each other, continued its advertising and sales departments as coordinate units and employed two additional men experienced in advertising.

(1924)

In 1924 the executives of the Deloria Cleanser Company contemplated combining the advertising department with the sales department as a means of furthering departmental cooperation and relieving the president of the work he had taken over in

¹ Fictitious name used for purpose of disguise.

connection with the advertising department. The alternative was to continue the advertising department as an independent unit, increasing its personnel by the addition of experienced assistants.

The Deloria Cleanser Company manufactured and distributed household cleansing articles throughout the United States. The company sold principally to wholesalers; approximately 30% of its sales were made directly to individual buyers, chain stores, and cooperative purchasing associations. Of the company's eight products, four made up nine-tenths of its total sales in 1923.

The company spent approximately \$1,000,000 for advertising during 1923. It advertised continually in widely distributed magazines which appealed to both men and women, in newspapers, and by means of street-car posters, billboards, and window displays. The advertising campaigns were conducted by three advertising agencies. Such development work as the designing of window displays, of dealer helps, and of containers for the products, and the planning of special sectional campaigns, was done by the advertising department. In addition, all advertising copy prepared by the three agencies was submitted for the approval of the advertising department.

The managers of the sales and advertising departments of the Deloria Cleanser Company were responsible directly to the president. The sales department was controlled by a general sales manager and two assistant managers. Theoretically, the work of the advertising department was supervised and controlled by an advertising manager; in practice, however, the advertising manager was an executive in name only, since the major portion of the executive work of the department was done by the president himself. The president was capable of doing this work. He had occupied positions in every department in the company; at one time he had been sales manager and at another time advertising manager. The president wished to withdraw from the active supervision of the advertising department, however, and the executives of the company contemplated discontinuing the department as an independent unit and making it subordinate to the sales department.

In an executive conference it was stated that the subordination of the advertising department to the sales department would further departmental cooperation. It was pointed out, moreover,

that advertising was in reality a sales activity, and, in the case of household cleansing products, just as instrumental in securing sales as was personal salesmanship. Because of the keenness of the competition in this field, the company believed that the names of its products should be kept continually before consumers.

One of the executives remarked that, if the advertising department were maintained on an equal status with the sales department, the president would not be entirely relieved of responsibility even if experienced advertising assistants were employed. On the other hand, the general sales manager believed that, in a large company such as the Deloria Cleanser Company, no one man was capable of controlling both advertising and sales. In spite of the fact that the company employed advertising agencies, there was a mass of detailed work to be done by the advertising department. One of the assistant general sales managers stated that, in his opinion, the sales department had a sufficient number of problems of its own without attempting to formulate and execute advertising policies and campaigns.

Several of the executives maintained that, since advertising was a specialized field, advertising policies should not be dictated by men who were not expert in the field. The sales manager had a knowledge of advertising in its broadest sense only.

It had been the experience of the sales manager that his department was inclined to concentrate efforts upon a few territories. With the advertising manager independent of the sales department, it often had been possible to prevent that partiality from causing the neglect of other territories.

The company decided to continue the advertising department coordinate with the sales department and to employ two experienced advertising men as minor executives to assist the advertising manager and, hence, to relieve the president of much of the administrative and supervisory work that he had been doing in connection with the department.

COMMENTARY: Advertising should undoubtedly be considered a form of sales effort to be thoroughly coordinated with other forms of sales effort. The cooperation of those responsible for personal selling, advertising, and other methods is assured if the executive in charge of both is capable and unbiased. As an organization principle it would

seem advisable to have advertising and sales in the same department if a competent sales executive can be secured.

If good organization calls for a definite means of insuring harmony of production and sales and finance, it is equally logical to assert that good organization calls for definite means of bringing about coordination of advertising and personal salesmanship. Just as production is centralized under the almost universal practice under a production manager, so marketing might be centralized under a "marketing manager." Whether the marketing manager is a vice-president in charge of selling, or a sales manager, or a former advertising manager, the important point is that he has general responsibility as an operating marketing executive for the smooth working of the marketing department. He must be as willing to cut down the amount of advertising, if he can discover that he has used an undue proportion of that means, as to increase the amount of advertising, if he finds that the general effectiveness of his marketing can be increased thereby. The marketing manager need no more be an expert copy-writer than the production manager need be a skilled operator of one of the machines in his department. He needs a broader vision, greater understanding and executive ability than is required for the many positions now occupied by sales managers or advertising managers. Until we view the distribution problem as a whole and attempt to fit advertising and personal salesmanship both quantitatively and qualitatively to the task of bringing about more economical distribution, we cannot hope to make much progress in the solution of marketing problems. This broad view will not receive the emphasis it deserves, if advertising and sales departments constantly strive for selfish interests, forgetful of the fact that they have a common purpose.

The application of these principles to specific instances requires careful consideration of existing and available personnel. Prior to the period with which the Deloria Cleanser Company case deals, the coordination of personal selling and advertising obviously was accomplished through the president. The further statement that the duties of the sales manager were sufficient to occupy him fully may be taken to indicate that his ability was not of a high enough order to warrant placing him in charge of both. It is evident that if a man placed in charge of both advertising and selling does not understand the functions of both or is biased toward one or the other, it may be preferable to have coordination take place, not through a marketing official but through some general official, such as the president in this case.

May, 1926

H .R. T.

DIAMOND SUGAR COMPANY ¹

MANUFACTURER—BEET SUGAR

PACKAGE SALES—*To Meet Competition.* The competition which the company, a manufacturer of beet sugar, met from manufacturers of cane sugar had been intensified by the sale of cane sugar in packages. As a means of meeting this competition, the company considered selling its beet sugar in packages.

(1921)

In 1921 the Diamond Sugar Company, which operated eight beet sugar factories in Colorado and adjoining states, was selling its product entirely in bulk. Its sales were made chiefly to wholesale grocers in the Missouri River territory, where its product came into competition with cane sugar from eastern and southern refineries.

Beet sugar at one time had been considered inferior in quality to cane sugar and less satisfactory for use in making jellies and canning fruit. In a bulletin issued by the United States Department of Agriculture in 1908, however, it had been stated that there was no difference in the sweetness of beet sugar and cane sugar and that experiments had indicated that "under both commercial and household conditions beet sugar and cane sugar give equally satisfactory results for canning fruit and also for jelly-making."²

Cane sugar ordinarily was sold at a somewhat higher price than beet sugar in the same markets. According to the *New York Journal of Commerce*, January 20, 1921, "F. R. Hathaway, secretary-treasurer of the Michigan Sugar Company and of the Toledo Sugar Company, Detroit, Michigan, stated that the prejudice against beet sugar, fostered by the refineries, was fast disappearing. Beet sugar prices run 10 to 15 cents per 100 pounds lower than cane sugar prices, however, because only granulated can be produced from beets as against 25 to 30 types from cane. The reduction must be offered because the custom is to buy an assorted carload of sugars and something must be done to induce the buyers to purchase beet granulated and 'variety cane sugars.'"

Since 1912 the sales of cane sugar in packages had increased heavily in the eastern part of the United States. Sales of cane

¹ Fictitious name used for purpose of disguise.

² U. S. Department of Agriculture, *Farmers' Bulletin* 329, May, 1908.

sugar in that form intensified the competition that the Diamond Sugar Company must meet. The company could pack sugar in 2-pound and 5-pound cartons at an increased manufacturing cost amounting to $\frac{1}{2}$ cent per pound. This additional cost would be no greater than the cost incurred by cane refiners in packaging their sugar. Although at times exceptionally severe competition eliminated the differential, the wholesale and retail prices of package sugar ordinarily were about $\frac{1}{2}$ cent per pound above the prices for bulk sugar.

COMMENTARY: The problem which this case suggested for the Diamond Sugar Company was whether the company should undertake to market at least a portion of its product in packages. The reasons for hesitating to offer its product for sale in packages were the prejudice which had existed against beet sugar and the cost of packaging. On the other hand, the experience of the cane sugar companies indicated that consumers preferred to purchase sugar in packages because of the protection that it gave on weight and the cleanliness and preservation of quality that the package made possible. The use of packages, furthermore, would have rendered it possible for the Diamond Sugar Company to begin to establish a reputation for its brand. By means of packages, it could have identified its product. This identification would have been a stimulus to the improvement of quality. Use of packages probably would have assisted the company in meeting cane sugar competition and would not have involved giving up the bulk business entirely. From the retailers' standpoint, the use of packages would have been advantageous because of the saving of time that the packages would have afforded in selling.

The identification of the product by brand would have afforded an opportunity for the use of aggressive sales methods. Under conditions such as have existed in the sugar trade, where an unwarranted prejudice exists against a particular type of product, it is usually sounder policy to undertake constructive merchandising methods than apologetically to avoid identification of the product.

October, 1925

M. T. C.

NELSON BELT COMPANY¹

MANUFACTURER—MEN'S BELTS AND BUCKLES

ADVERTISING—*To Consumers through Use of Attractive Containers.* A company which manufactured men's leather belts and buckles shipped the

¹ Fictitious name used for purpose of disguise.

belts to retailers in unmarked cardboard boxes containing 12 each. These boxes retailers frequently placed in prominent positions on their shelves. The company saw in this fact an opportunity to advertise, which it decided to utilize by adopting an attractive container displaying the company's name and trade-mark. The new container was twice as expensive as the one in use.

CONTAINERS—*Increasing Sales Volume through Use of Individual Containers.* A company which manufactured men's leather belts and buckles for sale to retailers decided to attempt to increase sales by packing the belts in individual gift boxes without charge to the retailers. Previously, the company had packed the belts in boxes containing 12 each and had offered gift boxes to retailers at cost. The new plan was successful in stimulating sales.

(1919-1920)

In 1919 a paper box manufacturer, after making a thorough investigation of the Nelson Belt Company's sales methods and the uses made of the containers in which the company packed its products, recommended that the company adopt an improved type of container.

The Nelson Belt Company manufactured men's leather belts and metal buckles and sold them directly to retail clothiers, haberdashers, and department stores. The company advertised nationally, and its products were firmly established. The price of the belts to consumers varied from 50 cents to \$3 or \$4 each; a few varieties sold for higher prices. The belts were shipped to retailers from the factory by parcel-post in cardboard boxes containing one dozen belts each. The containers, which cost the Nelson Belt Company 3 cents each, were made of cardboard covered by plain white paper and had a label printed on one end. The boxes were protected for shipment by a corrugated cardboard wrapping. Retailers carried the cardboard boxes in stock on their shelves. Occasionally a box became shabby before the dozen belts were sold.

The container recommended by the paper box manufacturer also held one dozen belts. It was of stronger construction than the container in use, was covered with lithographed paper which displayed the Nelson Belt Company's name and trade-mark, and had an attractive label on one end. The price of the box to the Nelson Belt Company was 6 cents. Most of the executives of the Nelson Belt Company were of the opinion that use of the proposed container might increase sales more than sufficiently to

offset the added expense. Retailers would be inclined to place the attractive boxes in prominent positions on their shelves. The retailers' clerks would become familiar with the containers, and the customers might notice the boxes because of the distinctive label and cover design. In addition, the belts would be kept in better condition in the stronger containers. The box manufacturer cited instances in other industries in which manufacturers' sales to retailers had been increased by the use of improved containers. A producer of shoe polish and brushes had secured increased sales by adopting an attractive carton which could be utilized by retailers for display purposes and which was convenient for use by consumers.

Some of the executives of the Nelson Belt Company were inclined to believe that the merchandise contained in the box was the only factor to be considered in securing sales. They doubted whether the influence of containers was sufficient to affect the sales volume and, consequently, objected to a 100% increase in the expense for boxes.

The Nelson Belt Company decided to use the proposed carton, because of its advertising value. The company was satisfied with the results obtained.

In the first half of 1920, the company's sales volume declined. The company had enlarged its manufacturing capacity, and hence, found it essential to increase sales. The paper box manufacturer again proposed a change in the company's policy as to containers. It was the practice of the Nelson Belt Company to sell boxes for individual belts to retailers at about 10 cents each. This price allowed the company no profit. A consumer usually requested a box when the belt purchased was intended as a gift, and the boxes were sold principally for use during the holiday season. Although the Nelson Belt Company had endeavored to secure orders for boxes, in order to encourage the purchase of belts as gifts, its efforts had not been successful. The company had conducted contests for the sale of boxes among the salesmen, but it estimated that the number of boxes sold was only about 1% or 2% of the number of belts sold. Retailers hesitated to buy the boxes, because the added expense reduced their profits on the sale of belts. Since the belts were not packed in the boxes at the factory, those retailers who did purchase boxes used

them only after sales had been made, and not for display. Sometimes the stock of boxes carried by a retail store was not kept in a suitable place and the boxes became unfit for use.

The paper box manufacturer recommended that the Nelson Belt Company pack and ship the belts in newly designed individual gift boxes, and that no charge be made to the retailers for the boxes. If this were done, the retailers could use the boxes for display and thus suggest to their customers the purchase of belts for gifts. Under existing conditions, a customer had to ask to see a selection of belts from the retailer's shelves. The customer usually received his purchase wrapped in paper.

Since the Nelson Belt Company could not increase the price of the belts to retailers, because of the established resale price, the company would have to absorb the added expense. If the plan were not successful in stimulating sales, the company would face a loss equal to the cost of the boxes. So far as the company was aware, no other producer of belts ever had attempted a similar policy.

Because of the advertising value of the individual gift boxes and their probable appeal to consumers, the Nelson Belt Company decided to adopt the proposal. The retailers were pleased with the plan, and orders for the fall of 1920 were increased. The total sales volume for 1920 exceeded that for 1919, and the extra cost of the containers was absorbed by the increase. The boxes were popular with consumers, and, in the following year, the company supplied boxes of additional designs.

COMMENTARY: The success of the Nelson Belt Company in increasing its sales by adopting individual packing in gift boxes is, in a measure, indicative of the wisdom of the policy. The adoption of the attractive containers enabled the Nelson Belt Company to enter the gift market much more advantageously than before, and enabled it to secure the full sales value of the container. It must be pointed out that the company's product was suitable for gift purposes; furthermore, that the number and variety of gifts available for men is considerably more limited than for other classes of recipients.

The sales value of the container resulted from two facts: First, the container induced display by the retailer, that is, exposure to sale, which, in itself, is very important. The question of the relative importance of window and store display is far from being settled. Second, the container induced purchase because it furnished an attractive and

somewhat different type of gift. During the early period, the gift boxes containing belts and buckles would possess a novelty appeal, which might decrease somewhat in later years. Change in design of product and in containers would tend to offset this decrease, at least in part.

The disadvantage of the plan was largely that of the greater cost of containers, which would be offset only if greater sales volume were attained, with the lower unit selling expense which would follow. Nevertheless, the attractive container furnished to the Nelson Belt Company a competitive advantage, a selling point which other competitors would not possess, at least immediately, and which might have been expected to increase sales.

The plan, therefore, substituted increased salability through attractive containers for reduction in prices of the belt itself, which might have come had a separate charge been made for the container. That plan was cumbersome and has been proved ineffective.

The mere use of gift containers as a competitive advantage cannot long be retained. It would become necessary, therefore, for the Nelson Belt Company to attempt constantly to improve and increase the attractiveness of its containers relative to those of the competitors who would adopt similar plans.

May, 1926

H. R. T.

BARBOUR WELTING COMPANY

MANUFACTURER—SHOE WELTING

ADVERTISING—*To Public by Manufacturer of Patented Fabricating Part.*

Although shoe welting was sold directly to manufacturers and was purchased by the ultimate consumer as an integral part of another item, a company manufacturing shoe welting decided to advertise a new and more expensive patented welting, which it recently had placed on the market, in the *Saturday Evening Post* in order to encourage consumers to demand shoes made with that welting. The company had no definite means of knowing whether its satisfactory sales of the new welting were the result of a demand created among consumers by means of the *Saturday Evening Post* advertisements, but nevertheless decided to advertise the welting in *Vogue* and *Vanity Fair* as well.

NEW PRODUCT—*Methods of Introducing Patented Fabricating Part.* In 1924 a manufacturer of shoe welting began to sell a new, high-grade, patented welting which not only was more expensive than most other weltings but could not be used by shoe manufacturers until they had made certain adjustments in their machinery. Utilizing consumer advertising

and a missionary salesman, the company secured the interest and cooperation of shoe manufacturers and succeeded in selling the new welting widely.

(1924)

Although the products of the Barbour Welting Company were sold directly to manufacturers and were purchased by the ultimate consumer as an integral part of another item only, the company, in 1924, began to advertise directly to consumers.

In 1924 the Barbour Welting Company had been manufacturing high-grade Goodyear shoe welting for 30 years. The welt was a narrow strip of leather approximately one-half of an inch wide and one-eighth of an inch thick to which the upper and the sole of a shoe were sewed. The company also manufactured a cork welting, which differed from the ordinary welting in that the former had a ridge approximately three-sixteenths of an inch high along one side. On the outside of the completed shoe the ridge could be seen between the sole and the upper. This ridge was formed by a gasket sewed in with the ordinary Goodyear welting and was for the purpose of sealing the inner seam of the shoe against moisture and dirt. The ridge also served as a retaining wall to hold the shoe in shape.

In 1911, and again in 1914, the company had secured patents on a new form of welting known as Barbour Stormwelt. In the finished shoe this welting looked the same as the cork welting. Barbour Stormwelt was a solid, one-piece welting, however, and, consequently, was more effective as a means of sealing the seam. Barbour Stormwelt was manufactured by special machinery which cut and glued a strip of leather a little wider than the Goodyear welting. In 1924, the Barbour Stormwelt was completely protected by patents.

The company did not begin to sell the Stormwelt until February, 1924. In August of that year, the company decided to advertise the new welting in the *Saturday Evening Post* in four full-page black-and-white advertisements: the first to appear October 18; the second, November 15; the third, early in January, 1925; and the fourth, sometime in the spring of 1925. This was the first consumer advertising that the company had done; no other manufacturer of welting had advertised to consumers. Manufacturers of other producers' goods, such as automobile bodies, used consumer advertising, apparently with satisfactory

results. The company expected the advertising to create a consumer demand which eventually would be reflected in sales of the new welting to shoe manufacturers.

After the appearance of the first advertisement in the *Saturday Evening Post*, the sales manager of the company contemplated inserting a full-page advertisement in *Vogue* and in *Vanity Fair* during the months January, February, and March of 1925. The advertising agency which prepared the *Saturday Evening Post* advertisements stated that the cost of the additional advertising would be \$6,000. *Vogue* and *Vanity Fair* were selected for consideration because they usually featured the latest styles in wearing apparel. The company wished to create the impression that shoes made with Barbour Stormwelt were fashionable. *Vogue*, moreover, upon request and without charge sent to shoe retailers a mounted copy of each advertisement; these copies could be used for window or counter display. *Vanity Fair* provided the same service for a small charge.

Shoe welting usually was sold in units of 50 yards. The price of Barbour Stormwelt to manufacturers was 16 cents a yard, three times the price of the Goodyear welting. The company's cork welting sold for 21 cents a yard. It was necessary for a shoe manufacturer who desired to use the new Stormwelt to make a few slight adjustments in his shoemaking machinery. Extra parts costing approximately \$10 were required for each machine. The company sent a book of instructions in the proper handling of Barbour Stormwelt to shoe manufacturers. In addition, the company employed a man who formerly had been superintendent of a shoe factory to visit shoe manufacturers and to aid in making the necessary adjustments.

The Barbour Welting Company employed 11 salesmen, 3 to solicit trade in eastern shoe manufacturing centers, 3 to sell in the Middle West, and 5 to sell abroad. These 5 sold approximately 17% of the company's total output. In 1924 the company was selling to approximately 275 shoe manufacturers. Included in this number were most of the large shoe manufacturing companies in the United States. A standard directory of manufacturers, in 1924, listed slightly over 1,000 companies engaged in making shoes in the United States. In the sale of Goodyear and cork welting, the company had 28 competitors. Seventy-five per cent of the sales of the company were of Good-

year welting. Competitors could not manufacture and sell Barbour Stormwelt, because of the patents.

The Barbour Welting Company for several years had inserted advertisements approximately once a month in each of three trade papers. During 1922 and 1923, the company had spent \$16,000 for advertising; this amount included the rental for the Boston sales office. During those 2 years, the company had sent each month 1,000 circulars describing Goodyear and cork welting to manufacturers who had bought previously from the company, and to the larger wholesalers and retailers of shoes. The advertisements and the circulars were prepared by the company and not by an advertising agency.

In May, 1924, the company employed a missionary salesman to call on shoe retailers east of the Mississippi River and to impress upon them the advantages of purchasing shoes made with Barbour Stormwelt. This was the first time that the company had employed a missionary salesman. The cost was approximately \$200 a week. By August, 1924, 176 shoe manufacturers had included, among their samples, shoes made with Barbour Stormwelt.

The purpose of the *Saturday Evening Post* advertising was to encourage shoe retailers to order shoes made with Stormwelt. In the first *Saturday Evening Post* advertisement, emphasis was placed on the fact that shoes made with Stormwelt retained their shape longer than did those made with the ordinary welting. In the second *Saturday Evening Post* advertisement, the caption was, "A Suggestion to Every Man Who Hates to Get His Feet Wet." Each advertisement in the *Saturday Evening Post* cost the company \$7,200; \$7,000 was the regular price for a full black-and-white page in the *Saturday Evening Post*, and \$200 was the amount asked by the advertising agency for making up the advertisement.

By the latter part of November, 1924, the company had sold 3,000,000 yards of Barbour Stormwelt to 260 shoe manufacturers. Approximately one yard of shoe welting was required for a pair of shoes. One shoe manufacturer purchased only two yards of Stormwelt in his first order. After displaying the two pairs of shoes that had been made up with the welting, he placed an order for 25,000 yards. Another shoe factory, which was on the verge of a shutdown, received orders for 85,000 pairs of

shoes made with Stormwelt and, hence, was able to continue in operation. A third shoe manufacturer, who was well supplied with cork welting, decided to purchase Stormwelt because of the orders for shoes with that welting which his salesmen received from retail shoe dealers. A number of shoe retailers in their newspaper advertising stated that their shoes were made with "the famous Barbour Stormwelt."

The sales manager of the company, after the appearance of the first *Saturday Evening Post* advertisement, induced each of 14 shoe manufacturers to contribute \$100 to the publication of a booklet on Barbour Stormwelt. Each manufacturer had in the booklet a page displaying a picture of his shoe made with Barbour Stormwelt. As a result of the cooperation of the 14 shoe manufacturers, the Barbour Welting Company was able to send the booklet to 27,000 retailers at practically no cost to itself.

Although the company had no means of measuring definitely the results of the *Saturday Evening Post* advertising, it decided to place full-page advertisements in *Vogue* and *Vanity Fair* during January, February, and March of 1925.

COMMENTARY: This welting was a fabricating material, a type of industrial goods, sold to manufacturers of shoes and not to the general public. The strategy of the plan of consumer advertising was to build up a consumer recognition, preference, or insistence for shoes equipped with Stormwelt. If consumer preference or insistence for shoes equipped with Stormwelt could be built up, then retail dealers would prefer shoes furnished with this welt and manufacturers would have a real reason to place the welt in their shoes. In other words, the effect of the consumer advertising would be to induce manufacturers to use it because it would increase the salability of their product. It might be that the consumer advertising would have some direct effect upon retailers without waiting for the consumer preference to develop.

Undoubtedly, if people could be induced to buy shoes, or even prefer shoes because of the presence of the Barbour welt in them, then manufacturers undoubtedly would be induced to use the Barbour welt because of the increase in the salability of their products.

The problem, then, comes down to a question of whether consumer insistence or preference for shoes with Barbour welt could be expected. This leads to the question of the importance of the welt in the final product and a determination of whether it would furnish a strong buying motive for consumers in the selection of shoes. Unless a fabricating

part does furnish such a buying motive, leading or helping to lead to the selection of the final product by the consumer, then advertising it to consumers does not appear justifiable.

The men's shoes upon which this expensive welt were to appear would probably be better-grade shoes. Such shoes ordinarily are purchased as specialty goods and are bought on the basis (1) of dependence on the brand of the manufacturer, or (2) of reliance on a retailer handling his own private brand. In purchasing such shoes, men probably are influenced by the motives of pride in personal appearance, to some extent by style emulation, and by the rational motives of dependability in quality and durability. In some instances the motives of maintaining and preserving health and securing personal comfort are influential.

It is to be noted that in its advertising of Stormwelt the company appealed to the motives of economy in use, personal comfort, and preservation of health.

While the motives used by the Barbour Welting Company were those which influence men in buying shoes, and while the new welt was visible and could be recognized on shoes, still, it is doubtful whether even with considerable expenditure for advertising, consumers would be led to insist upon shoes with that particular welting, or even would come to prefer shoes with that welting. Since they buy shoes on the basis of dependence on the manufacturer's brand or a retailer's private brand, they probably would not be inclined to reject such a brand or the dealer's offering merely because of the absence of a relatively minor part of the shoe, such as the welt.

It might be argued that consumer advertising of the welt would furnish or strengthen a selling point for the retailer and for the manufacturer in selling shoes. While a consumer would not insist on shoes with a certain welt, he might be influenced by the presence of a good welt, which he knew through advertising. In this respect, the consumer advertising probably would have some value and manufacturers might be inclined to favor the Barbour welt because it could be used to increase the salability of their product. It is to be noted in the problem that some retailers did use the Stormwelt as a selling argument in their advertising and selling.

The expense of a consumer advertising campaign in such a medium as the *Saturday Evening Post*, however, is large. If the consumer is to be influenced, such advertising probably would have to be continued over a period of time. Since the product is reported as superior to other welting, since it is doubtful whether a consumer preference for shoes with Barbour welt could be built up, and since the value of the welt as a selling point for the retailer is not considered especially large,

it would appear to have been preferable for the Barbour Welting Company to direct its sales promotion entirely to manufacturers with use of the motives of dependability in quality and of increasing salability of product. To increase the strength of the latter motive some promotion, especially through advertising, might have been directed to retail dealers in order to acquaint them with the advantages of Barbour welt.

The full effectiveness of the consumer advertising apparently would not be realized unless retail dealers were induced to use the Barbour welt as an additional selling point with the consumer.

May, 1926

N. H. B.

MARGATE COMPANY¹

SELLING AGENT—TEXTILES

MANUFACTURER'S BRAND—*For Semistaple Merchandise.* This company was the selling agent for a manufacturer of staple apron gingham which had an enviable reputation for quality. The development of competition caused the selling agent to attempt, in 1913, the introduction of a new line, that of semistaple gingham, under the mill brand. The brand was unadvertised. This brand policy was unsatisfactory. Large wholesalers refused to purchase the mill brand, which subsequently was discontinued.

MANUFACTURER'S BRAND—*For New Line of Style Merchandise.* In 1917 a selling agent proposed to a mill that it produce a standard quality style line of gingham under a mill brand to be established with trade and consumer advertising. The mill accepted this proposal, beginning production of the new line for the spring season of 1918 and continuing it with an initial three-year advertising plan.

(1917)

The Margate Company was the selling agent for several cotton textile manufacturers, including the Denby Mills,¹ which manufactured gingham. These mills originally had produced and sold only unbranded apron gingham which were known nationally for their quality. In 1913, at the suggestion of the selling agent, the Denby Mills had begun the production of a line of gingham with a wider variety of patterns and styles under the mill brand of "Middlesex Gingham," but its experience with this mill brand had not been wholly satisfactory. In 1917 the selling agent proposed to the Denby Mills that it add a new line of style

¹ Fictitious name used for purpose of disguise.

ginghams of a standard quality under a mill brand which it should support by consumer and trade advertising.

From the time of the establishment of the Denby Mills until the years immediately preceding 1913, its apron gingham was demanded widely by the trade, and the Margate Company had no difficulty in disposing of the Denby gingham to cutters-up and wholesalers. It sold more than three-fourths of the gingham to wholesalers. In the years just prior to 1913, other manufacturers developed apron gingham which sold at a lower price than those of the Denby Mills. The quality of those gingham, while not equal to that of Denby gingham, gave satisfactory wear for the prices charged. The Denby gingham were not of sufficiently superior quality to warrant fully the difference in price between them and those of the other mills. It was because of this competitive situation that the selling agent recommended the introduction, in 1913, of the mill brand, Middlesex Gingham. It was desired eventually to market the entire production of the mill under this mill brand.

The Middlesex Gingham were of a slightly higher quality than the apron gingham and were considered at that time to be style gingham. While these gingham were mill-branded, they were not advertised, and their introduction to the trade depended upon the salesmen of the Margate Company. This was the first attempt of the Denby Mills to establish a mill brand.

It was the custom in the gingham trade for a large wholesaler to sell several lines of gingham. Besides his own private brand he might carry unbranded gingham, mill-branded, agent-branded, and imported gingham. At this time, only two American-made mill brands of gingham were established firmly. Both of these had been established 25 years or more previous to 1913. These mill brands were not advertised and, while they were accepted by the trade, their sales volume had been built up gradually over a long period of time. The sales volume of each was large for a single brand. Because of their custom of carrying privately branded gingham, the large wholesalers refused to purchase the gingham styled for the Middlesex brand unless their private brands were substituted for the Middlesex brand. Smaller wholesalers purchased the Middlesex brand, but, in 1917, less than 40% of the production of the Denby Mills was sold under the Middlesex brand.

When gingham were sold under a private brand, the owner of the brand was in a stronger position to negotiate the price he would pay for his gingham. If a mill refused to accept his price, he had the privilege of turning to some other manufacturer. Because of the small amount of gingham sold under the Middlesex brand, the Denby Mills were being forced to sell this line under private brands and to meet the prices asked by the wholesalers. This condition tended to weaken the company's position in the trade, and the Margate Company believed that steps were necessary to enable the mill to maintain its strong trade position and the reputation it had established during many years.

The Margate Company followed the policy of establishing brands for the mills it represented, and had not attempted to establish private brands of its own. During the few years preceding 1917, it had established individual mill brands for two mills through the help of advertising and through the refusal of the two mills to ship their products under any brand but their own. It had taken about three years each to establish firmly those two brands. The Margate Company proposed to establish in the same manner a mill brand for style gingham of the Denby Mills.

In 1917, when the Margate Company proposed that the Denby Mills add a style line of gingham to its apron gingham and Middlesex Gingham, the vogue of gingham, particularly for outdoor dresses, was becoming increasingly evident. The high prices of other fabrics at that time made cotton textiles preferred because of their economy. Of the cotton textiles, gingham were preferred to percales because the colors were woven into the gingham, and women placed more dependence in colors of woven fabrics than in those of printed fabrics such as percales.

The dyes used for gingham by English manufacturers had begun to deteriorate by 1917, when the usual fast colors of those manufacturers were "bleeding" frequently. The Denby Mills had a large stock of fast-color dyes and could produce a fast-color style gingham to sell at a medium price. It was proposed that this style line consist of 32-inch gingham. At that time, the usual width for gingham was 27 inches.

As a part of the proposed advertising and merchandising program, the Margate Company included recommendations that considerable attention be given to the styling of the gingham,

and that a machine be installed to brand the cloth on the selvage twice in every yard with the statement "Denby Mills Connaught Gingham," the name "Connaught" being proposed for the style line. As plaids and stripes in gingham were rarities at that time, it was suggested that plaids and stripes be featured.

The experience with the Middlesex brand indicated to the mill and to the selling agent that a mill-branded gingham could not be introduced successfully within a few years without advertising. While the selling agent was convinced that the gingham, in order to be salable under a mill brand, would have to be particularly well designed to overcome the opposition of the wholesalers, it also was convinced that, no matter how good the designs, the brand could not be established without consumer advertising. Designs could be copied, and, unless the consumer associated a brand as well as a style with the gingham, the style product of other mills might be substituted for that of the Denby Mills.

To insure the proper advertising for the proposed new style line of gingham, the selling agent asked the Denby Mills to appropriate \$64,500 for a three-year advertising campaign, which was to be carried on by the selling agent. A three-year advertising appropriation was requested, because it had been the experience of the Margate Company with both the brands previously established that no definite results could be traced to the advertising before the third year. The selling agent also requested that the mill refuse to manufacture any numbers of the proposed mill-branded style line under a brand other than its own.

The Denby Mills accepted the proposal of the Margate Company and a new line was produced for the spring season of 1918. Advertising to the trade was begun in the autumn of 1917. In the spring of 1918, a color page was used in the *Delineator*, and this, with booklets, constituted the consumer advertising for the year. The total advertising expenditure from 1918 through 1922 was slightly over \$150,000. The Middlesex brand was discontinued in 1921. By 1922, over half the production of the Denby Mills was in Connaught Gingham. Distribution was obtained by selling to one or two wholesalers in a territory at first, usually to the smaller ones. Other wholesalers purchased when their salesmen complained of the competition they were meeting from the Connaught line of style gingham. The advertising was merchandised through booklets, store cards, and other dealer helps.

During those years, the advertising to the trade stressed the style of the gingham, while that to consumers emphasized style, color, durability, and economy. In 1925 the brand had been advertised regularly to consumers and to the trade since its adoption.

COMMENTARY: Two primary issues are involved in this case: (1) The extent to which a consumer preference or insistence can be built up for a line of style gingham through advertising. (2) The attitude of wholesalers toward carrying mill brands of textiles of this type.

The new brand, in style gingham, could be relied upon to give assurance to consumers of fastness of color, of non-shrinkage, and of uniformity in quality. But, unless the company's styles and patterns were as attractive as those of competitors, the company could not expect the advertising to induce consumers to select the Connaught gingham. If the Connaught styles proved as attractive as competing styles, then the reputation for quality of fabric and color would give brand preference.

It is to be noted in this case that as a part of the proposed advertising and merchandising program, the Margate Company recommended to the Denby Mills that considerable attention be given to the styling of the gingham. If the consumer advertising of style textiles was to prove effective, good judgment and skill in designing had to accompany the advertising which served to establish the reputation of quality.

For convenience goods, which do not have the seasonal style changes that characterize shopping goods, consumer advertising on the part of the manufacturer may build up a consumer preference or insistence which will induce wholesalers to handle manufacturers' brands. In regard to shopping goods, however, especially those for which style is an important element, inducing wholesalers to carry a mill brand because of consumer advertising is more difficult than with convenience goods. The wholesaler does not play relatively such an important part in distribution in shopping goods as does the wholesaler of convenience goods. The trade in highly seasonal goods and novelties tends to center in the primary markets or is carried on direct, without the use of wholesalers. Undoubtedly, the tendency is to eliminate the wholesaler when the seasonal changes in goods become a predominant characteristic.²

For cotton piece goods, such as gingham, the wholesalers have continued to play an important part in distribution. The seasonal changes in styles have not been a strong enough factor to overcome the advantages of distribution through wholesalers.

At the same time, the style element has undoubtedly been a strong

² See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. ff.

factor in perpetuating the custom of wholesalers' and other private brands in place of mill brands, whereas in the convenience goods trades, manufacturers' brands have become increasingly important and wholesalers' brands less important. One of the chief reasons for this was suggested before; style has made it more difficult to establish a strong consumer brand preference. In the next place, the wholesaler and the retailer in their purchasing will reflect largely the motives that govern the purchases of consumers. Accordingly, just as the Denby Mills could not depend on advertising alone to establish a consumer insistence for its brand but had to have proper styling to insure that consumers would select its brand, so it should have expected that the wholesaler and the retailer in turn probably would insist on selecting lines of gingham primarily upon their judgment of the probable style strength of the designs for the season. If, in undertaking the advertising program, the Denby Mills succeeded in skilfully styling the gingham and thus being in position to take advantage of the consumer preference established by the advertising, then undoubtedly wholesalers would be influenced in stocking the Connaught brand. Without proper styling, wholesalers and retailers probably would prefer either to select their own styles, irrespective of brand, or to specify designs under a private brand. When the wholesaler has his own brand, he is in a better bargaining position in buying from an agent or mill.

Under any conditions, it should have been expected that wholesalers and retailers would insist upon using their own judgment in picking styles. Unless the Connaught styles were considered at least equivalent to those of other brands, wholesalers probably would prefer to select gingham irrespective of brand or promote their own brands in which they accepted the responsibility for design.

November, 1925

N. H. B.

DAVING SHOE COMPANY¹

MANUFACTURER—SHOES

BRANDS—*Trading Down Prevented by Use of Different Trade-Marks for High-Grade and Low-Grade Merchandise.* A company which manufactured both high-grade and low-grade shoes sold under the company's name only the high-grade shoes, which were the more profitable. All national advertising was of the high-grade merchandise. Although the company's most successful salesman said that he could double his sales of the less expensive shoes if they were stamped with the trade-mark used on the high-grade shoes, the company, rather than risk injuring its

¹ Fictitious name used for purpose of disguise.

more expensive and more profitable lines, decided not to use the same trade-mark on both its high-grade and low-grade merchandise.

(1924)

The Daving Shoe Company operated two factories. One, located in St. Louis, Missouri, specialized in men's and women's high-grade shoes. The other plant, located in East St. Louis, Illinois, manufactured men's low-grade shoes exclusively. Only the high-grade shoes bore the name Daving Shoe, which was the trade-mark of the company. The low-grade footwear made at East St. Louis was stamped St. Louis, Southerner, or Chippewa. No mark appeared on these shoes to identify them as products of the Daving Shoe Company.

The company employed 40 salesmen to sell its products throughout the United States. These men left the main office for a four months' selling trip in March and again in October of each year. They carried samples of all grades of shoes. Salesmen often secured orders for the low-price shoes by emphasizing the fact that although those shoes did not bear the Daving Shoe trade-mark they were made by the Daving Shoe Company.

The company's annual advertising appropriation was about 3% of sales. Of this amount, about two-thirds was spent on dealer helps and local advertising, and about one-third on advertisements in national publications. No national advertising had been done until 1919. Almost all the advertising was of shoes bearing the Daving Shoe trade-mark. The company desired to advance the sales of its higher quality products, which also were the more profitable. Exhibit 1 tabulates by grades of shoes, the company's sales and net profits during the fall of 1923. Sales for that period totaled approximately 250,000 pairs. The average wholesale prices varied from \$7.25 per pair to \$3.85 per pair, and the net profits from 40 cents per pair on the most expensive shoes to a loss of 4 cents per pair on the cheapest shoes.

On several occasions, the suggestion had been made that the Daving Shoe trade-mark be used on all the shoes manufactured by the company. The president, who was the largest stockholder in the company, always had objected to the plan. He did not wish to have the company's name appear on any but high-grade shoes. It seemed to him that the sale of low-grade and high-grade shoes under the same trade-mark would injure the stand-

EXHIBIT I

SALES, PRICES, AND NET PROFITS FOR DAVING SHOE COMPANY
DURING FALL OF 1923

Grade of Shoe	Number of Pairs Sold	Average Wholesale Price per Pair	Average Net Profit per Pair
Daving A grade (men's)....	1,000	\$7.25	40 cents
Daving B grade (men's)....	120,000	6.40	30 cents
Daving C grade (men's)....	40,000	5.75	1 cent
Daving (women's).....	10,000	5.25	35 cents
St. Louis.....	60,000	4.85	25 cents
Southerner.....	15,000	4.20	15 cents
Chippewa.....	10,385	3.85	4* cents

*Loss.

ing of the more expensive and more profitable lines. Because the margin of profit on the low-price shoes was small, the company could not guarantee them as it did the more expensive lines. The president did not want shoes which the company was unwilling to guarantee stamped with the company's trade-mark.

In 1924 the company's most successful salesman suggested that the name Daving be stamped on all shoes which the company made, together with another name to designate the grade, such as Daving Chippewa. He stated that he could double his sales of the less expensive shoes if they bore the name of the manufacturer. He maintained that all grades of shoes sold by the company should be given the benefit of the national advertising and of the good-will which the Daving Shoe Company had obtained.

The salesman pointed out that, although the company's profit per pair of low-price shoes was small, a substantial growth in sales would increase the amount of profit obtained by the company. He suggested, however, that, if the company put the Daving name on the less expensive lines, the prices of those lines be increased slightly. If the shoes bore the Daving Shoe brand, their prestige would be increased. Consumers were willing to pay more for nationally advertised articles. This salesman stated that it had been his experience that purchasers of low-price shoes did not expect the manufacturer to guarantee them to the same extent as it guaranteed the high-grade footwear.

The company, because it did not wish to follow a policy which might injure the standing of its more expensive and more profit-

able lines, decided not to stamp the low-grade shoes with a trademark containing the company's name.

COMMENTARY: The problem confronting the Daving Shoe Company was, fundamentally, to determine the effect of allowing the public to know that the company sold low-grade articles in addition to the high-grade products which had been featured in advertising and by salesmen, and which were identified by the Daving Shoe Company's name. It is obvious that the low-grade shoes would have been benefited by the imprint of the Daving name. The problem concerned the effect upon the high-grade products, which, in this case, appeared to be the chief line upon which the company depended for its profit.

It is true that in many companies, both high- and low-grade products are sold successfully under the same brand or under the same manufacturer's name. That is ordinarily possible because customers and purchasers can distinguish easily between the low-grade and the high-grade products which are being offered. The ease with which distinctions can be made depends upon the character of the product and the expertness of the buyer.

It seems, however, that the Daving Shoe Company's decision not to brand the cheaper products was correct, primarily because the different grades of its products were not readily distinguishable by consumers, and hence the use of the Daving name would have tended toward confusion in the minds of the customers concerning the quality of the Daving goods. When low-grade and high-grade goods are sold under the same brand, there is an inclination on the part of users to attribute the same qualities to both grades and to expect the same degree of satisfaction from the low-grade as from the high-grade products. For that reason, some dissatisfaction with the cheaper line must be expected. Such dissatisfaction affects unfavorably all the products, including the more expensive, sold under the brand. When a company already has gained a reputation for high-grade branded merchandise, an increase in the sales of a new low-grade product sold under the company's brand is likely to result, and may be accompanied by decreases in the sales of the high-grade product. The low-grade product tends to become the chief line, whether or not the company wishes it.²

A different aspect of this tendency was brought out in the case of the Badger Watch Company. In that case, the introduction of a higher grade of watches, widely advertised under an allied brand name, served chiefly to stimulate sales of the company's established low-grade lines.³

² See Hardy Confectionery Company, 1 H.B.R. 424; commentary, 2 H.B.R. 526.

³ Badger Watch Company, 1 H.B.R. 420; commentary, 2 H.B.R. 525.

The second question which the Daving Shoe Company had to answer was the possible advisability of featuring the low-grade line with the expectation that the additional sales would bring greater net profit than an attempt to maintain emphasis upon the high-grade line. That problem is not considered in this discussion.

May, 1926

H. R. T.

CLAYTON CHINAWARE COMPANY ¹

MANUFACTURER—COOKING CHINA

PRICES—*Maintenance of High Prices in Period of Declining Prices—Effect on Sales.* Although most prices were declining and the company, a manufacturer of cooking china, could reduce the prices of its products and still earn a reasonable profit, the company decided to maintain its existing prices because it believed that a price reduction would have little effect on sales.

MONOPOLY—*Effect of Inelastic Demand on Prices.* Because a company producing china had a virtual monopoly of its product in the United States, and because the demand for its product was inelastic, the company did not reduce its prices when manufacturers of other products reduced theirs and when its production costs decreased.

PRICES—*Maintained at Level Above Production Costs.* Although, because of an unpatented manufacturing process which it had developed, the production costs of a company manufacturing cooking china were substantially lower than those of its one competitor, and in spite of the fact that other manufacturers might perfect a similar process at any time or foreign manufacturers succeed in entering the market, the company decided to maintain its prices at the existing high level.

(1922)

The Clayton Chinaware Company had a virtual monopoly of the supply of cooking china in the United States. This company produced 90% of the hotel, restaurant, dining car, and private home cooking china manufactured in the United States. Another company, whose production costs were materially higher than those of the Clayton Chinaware Company, produced the remaining 10%. In addition, European manufacturers occasionally shipped high-grade cooking china to the United States.

Customers admitted the superiority of the Clayton Chinaware Company's china, which had unusual heat and destruction resisting qualities.

¹ Fictitious name used for purpose of disguise,

From 1905 to 1915, the prices of the company's products seldom changed. From 1915 to 1920, wages increased 100%. The cost of supplies also rose at frequent intervals. Quotations on the company's china in 1920, consequently, were approximately 100% higher than they had been in 1915. In 1921, when wages and the cost of supplies declined, the company reduced the prices on its products 17%. After another decrease in wages of 5% in October, 1922, wages were approximately 60% above those which had been in effect in 1915. Expenditures for labor and supplies constituted 62% of the total production costs. Although the company could lower its prices further and still receive a profit, the executives were uncertain whether or not they should make a further reduction.

The company's production costs were unusually low. Most china companies had to bake their products twice; the Clayton Chinaware Company, however, had perfected its processes so that it could manufacture china of high quality with only one baking. Through long experience in the production of cooking china, the company had obtained a special knowledge of the proportions in which the different varieties of clay should be mixed. The clay was mixed with water, molded, dipped in color, dipped in a glazing compound, and then baked for from 48 hours to 72 hours. The company had no patents on its process.

The Clayton Chinaware Company never had attempted to produce table china. The process of manufacturing such china was somewhat different from that of producing cooking china. Competition in table china, moreover, was keener than in cooking china. The company had secured a favorable reputation for its products and obtained satisfactory profits.

The company's one competitor, who produced china for table use also, employed manufacturing processes usual among china manufacturers. The clay was molded, baked, dipped into color and into a glazing compound, and then baked a second time. Several companies had attempted to bake the china only once, but they were handicapped by their lack of knowledge and experience in the process. All but one of the companies which had attempted to produce cooking china by either of these processes had discontinued the line after a short period.

Enamel, aluminum, and earthenware cooking dishes competed to some extent with the company's products on a price basis.

In 1921 the Clayton Chinaware Company had reduced the price of its teapots from \$7.25 per dozen to \$6 per dozen. The price of enamel teapots at that time was \$3.50 a dozen, and of earthenware teapots, \$2.50. The company believed, however, that most of its customers preferred china cooking dishes to enamel or aluminum. Earthenware dishes were easily breakable, were porous, and were likely to absorb the flavor of foods cooked in them.

During 1921 and the early part of 1922, European potteries had exported only a comparatively small quantity of cooking china to the United States, because of high operating costs and the 55% ad valorem tariff on that product. It usually was not profitable for European manufacturers to ship cooking china to the United States to compete with established domestic products unless the prices of the foreign dishes were substantially lower than the prices of the domestic utensils. European manufacturers, moreover, had many markets besides the United States. Those manufacturers, furthermore, concentrated on table china rather than on cooking china.

In regard to labor supply, a long apprenticeship in the company's plant was not necessary; an employee in a china factory could become an effective workman in from 8 to 12 weeks. It was the company's policy to pay liberal wages. The company maintained an open shop, but the unions were so strong in that section that there were few non-union workmen. Abundant labor was available, however, and the unions could not force the company to pay unduly high wages.

The china to be used in hotels, restaurants, or dining cars was sold to wholesale distributors. There were so few of these in the United States that one of the chief executive officers of the company acted as salesman. A small quantity of the china, principally teapots, was distributed directly to department stores.

The general policy of the Clayton Chinaware Company had been to quote prices as high as possible without leading additional competitors to enter the market and without incurring too vigorous complaints from customers. The price reduction that had been made in 1921 had dispelled the spasmodic attempts of customers to persuade other manufacturers to produce cooking china. The point of stabilization that had been reached at that time gave the Clayton Chinaware Company a net profit of approximately 15% on sales.

The executives stated that the china industry, particularly the Clayton Chinaware Company's division of it, was not so susceptible to fundamental changes in business conditions as were most industries. Sales in 1921 and the early part of 1922 had continued to be excellent, and the executives did not expect demand to decrease. They were of the opinion, nevertheless, that if the company was to maintain sales, it must retain the good-will of its customers. Manufacturers of nearly every product were reducing prices at that time, and customers might criticize the Clayton Chinaware Company if its prices were unchanged.

If high prices were maintained, new competitors might enter the market. It was quite possible that eventually competitors who were strong enough financially to operate with no profits or at a loss for a short term of years would be successful in developing manufacturing processes as satisfactory as those of the Clayton Chinaware Company. The executives of the company were of the opinion that the failures of competing potteries were the result of mismanagement rather than of inability to duplicate the production methods of the Clayton Chinaware Company. At that time, however, no new company was making a serious attempt to secure the Clayton Chinaware Company's sales.

If the Clayton Chinaware Company quoted prices much more than 100% above the cost of enamel, aluminum, or earthenware dishes, there was a possibility that customers might substitute those wares for the company's products. It was impossible, however, for the company to reduce its prices enough to compete with the prices of enamel, aluminum, or earthenware pieces and still to make a profit. A smaller price reduction than that necessary to meet the competition of other products on a price basis might result in sales to people using enamel or earthenware products. It was unlikely, however, that the company could increase sales to hotels, restaurants, or dining cars, since they already were using high-grade china and their demands showed little variation.

It was impossible, moreover, for the company to foresee the time when foreign competitors might enter the domestic market successfully. The executives of the company estimated in October, 1922, that foreign manufacturers could not quote prices below those of the Clayton Chinaware Company for some time to come, even if the company did not lower its prices. A domestic

company had the advantage of being able to fill orders more promptly than a foreign competitor.

The Clayton Chinaware Company decided not to lower its prices at that time. The executives believed that because the demand for the company's products was extremely inelastic, lower prices would not increase sales materially.

COMMENTARY: The headnotes to the case indicate the essential points raised. The case illustrates certain phases of the economic theory which underlies the price policy of a monopoly. The demand for the product of this company was inelastic; that is, a substantial decrease in price would not result in a greatly larger volume of sales, and price reduction would result in lessening the profits which could be secured by keeping prices high. The monopoly was not complete; but few monopolies are in complete control of the supply of the product dealt in, or in control of the possible substitutes. Maintenance of prices on a high level, with attendant high profits to the monopolist, necessarily tempts other business men to produce a competing or substitute article. In this case, the managers were confident of maintaining their position in the industry and so kept prices and profits high.

May, 1926

H. B. V.

GROSSLAND BOOK COMPANY¹

IMPORTER AND PUBLISHER—BOOKS

IMPORTING—*Determining Selling Price in View of Foreign Competition.* An American publisher and an English publisher contracted with a French printer for exclusive sales rights to a travel book. The American company was confident that it could sell the book at a price which would allow it more than its usual gross margin and which would be about twice the price set by the English importer. In view, however, of the possibility of American retailers' buying directly from England and the fact that, since the book could not be copyrighted in the United States, low-price imitations might be marketed by other American publishers, the American importer decided to take only its customary gross margin.

PRICES—*Estimating on Basis of Competitive Prices and Foreign Competition.* In setting the selling prices of an imported travel book which also was to be sold in England by an English publisher, the company estimated what it would cost retailers and consumers in the United States to buy the book directly from English booksellers.

(1923)

¹ Fictitious name used for purpose of disguise.

The Grossland Book Company published and imported greeting cards, prints, and books for sale to department stores, book stores, libraries, and schools throughout the United States. In the fall of 1923, this company and an English company contracted with a printer in France for the exclusive sales rights to copies of an unbound travel book printed in English. The contract price was 8 francs per volume, with the value of the franc set at 6 cents for the first order of books. Both the Grossland Book Company and the English publisher agreed not to sell the books at the printer's price direct to any purchaser outside their own countries.

Each importer intended to have the books bound in his own country. The binding to be used by the Grossland Book Company would cost $28\frac{1}{2}$ cents per book; that to be used by the English publisher was less expensive and was not so attractive nor so well suited to the high-grade pages and prints. The English binding was of coarse cloth and had a flat back. The title was pressed into the cover. The American binding was of a smoother finish. The title on the cover was in gilt letters, and the cover had a round back, which the Grossland Book Company believed to be more substantial than a flat back. In the United States the cost of a binding similar to that to be used on the English book was about 20 cents per book.

The English publisher decided to sell the book in England at a retail price of 7s 6d. With the exchange value of the shilling at 22 cents, as the Grossland Book Company figured, 7s 6d was equivalent to \$1.65. The English publisher's wholesale price for the book was 5s, or \$1.10. In view of the prices in the United States of publications similar in quality and appeal to the new book, the Grossland Book Company believed that the book could be sold by its customers at retail for at least \$3. The company's usual solicitation of its customers before marketing the book substantiated this belief. The company deliberated as to whether it should set the retail price of its books upon the basis of the prices of similar books sold by American booksellers or upon the basis of the probable American selling price of the English book if imported by American bookstores.

The importers did not have the pages bound in France because French book binderies were not well equipped to affix cloth covers to books. Both the Grossland Book Company and the

English company believed that paper covers, which were used in France, would decrease the salability of the book. The Grossland Book Company did not wish to have the pages bound in England with the type of binding used by the English publisher. Pages imported into the United States bore a duty of 15% based on actual invoiced cost, whereas finished books were dutiable at 15% of the foreign publisher's wholesale market price.

The company's order with the French printer called for 750 sets of printed pages. The Grossland Book Company computed the total cost to itself of each finished book as 94.7 cents, as itemized below.

	Cost per Book
Printed pages in France.....	48. cents
Duty	7.2 cents
Total freight and insurance (landed at port in United States)	11. cents
Binding in the United States.....	<u>28.5 cents</u>
Total Cost.....	94.7 cents

The Grossland Book Company's customary gross margin was approximately 40% of selling price. If the company based the price of the travel book on this mark-up, the selling price to retailers would be \$1.60. The average mark-up for retailers of books was about 35% on selling price; on this basis, the consumers' price would be set at \$2.50. According to estimates made by the Grossland Book Company, the cost of the book to a retailer in the United States who purchased from an English bookseller would be \$1.53; and the cost to a consumer in the United States who purchased from an English bookseller, \$1.94, as computed in Exhibit 1.

If the Grossland Book Company set the retail price at \$3, as its customers believed practicable, its wholesale price would be \$1.95; that is, \$3 less the average mark-up of 35%. This would be about 40 cents more than the estimated price to an American retailer of the English book purchased from an English bookseller. The Grossland Book Company believed that if it set the wholesale price at \$1.95 some book retailers in the United States would purchase the English book. Some of the larger book buyers in the United States maintained purchasing agents abroad. The Grossland Book Company was convinced that its binding was superior to the English binding, but the company

EXHIBIT I

GROSSLAND BOOK COMPANY'S ESTIMATES OF COSTS TO BOOKSTORES
AND CONSUMERS IN THE UNITED STATES OF TRAVEL BOOK
IF PURCHASED FROM ENGLISH BOOKSELLER

COST TO BOOKSTORE PER BOOK		COST TO CONSUMER PER BOOK	
Cost of book.....	5s 7½d	Cost of book in England.....	7s 6d
7s 6d less 25%, the customary wholesale discount given by one retailer to another.			
Duty.....	9d	Duty.....	9d
based on the market wholesale price established by the English publisher to English booksellers— 15% of 5 shillings.		based on the English publisher's wholesale price—15% of 5 shillings.	
Freight and insurance.....	7d	Freight and insurance.....	7d
Total.....	6s 11½d or \$1.53	Total.....	8s 10d or \$1.94
(Rate of exchange — 1 shilling = 22 cents)			

knew that the small domestic retailers who were inexperienced in importing books would purchase the book by name only.

A publisher in the United States could not copyright in this country a book printed abroad. Any publisher, consequently, might attempt to print a book in the United States similar to the French travel book. The rotogravure prints of the foreign book could not be reproduced in the United States at the same price, but the Grossland Book Company believed that a book of high quality with the same printed matter could be published in the United States to sell at retail for about \$2.50.

Other travel books of the type under discussion were sold in the United States for about \$5. The Grossland Book Company's experience indicated that the class of people to whom such a book appealed would be willing to pay a relatively high price for it. The fact that it was an imported article made possible a higher price than that allowed by the usual mark-up on books. The company believed that the foreign book was not the type on which sales could be increased by price-cutting.

If the sales of the imported travel book were large enough, the Grossland Book Company intended to publish a series of 14 travel books printed in France and having the same kind of pages, prints, and binding as the first book. If the company published the additional volumes, it desired to establish the same retail price for each volume. The contract price of 8 francs had

been given by the French company for the first book only. Fluctuations in the cost of printing in France and fluctuations in exchange might not permit the importer to obtain so favorable a price at a later date.

The Grossland Book Company decided that it was advisable to set a price on the book proportionate to the price offered by the English publisher. The company fixed the retail price at \$2.50, which allowed the customary mark-ups. The company did not believe that a retail price intermediate between \$2.50 and \$3 would be satisfactory, since the trade did not consider a price like \$2.75 a good book price. The company also was influenced in its decision to make the retail price \$2.50 by the fact that it desired to counteract the impression that the company handled only very high-priced books. It had many books on its list at \$25 to \$50, and it was generally believed that the company did not handle medium-priced books.

As a result of the number of orders taken from its customers, at the price fixed for retailing at \$2.50, it was necessary for the company to increase its original order with the French printer from 750 sets of printed pages to 3,000 sets.

COMMENTARY: As a general rule, a higher percentage of mark-up is necessary on imported manufactured products than on similar products purchased in the domestic market. This is because the risks involved in estimating landed costs of foreign purchases usually are greater than in the case of domestic purchases, particularly for those goods that bear import duties and that come from distant markets and from countries with unstable currencies.

In the first place, unless the goods are standard or stable goods, there is frequently uncertainty as to the actual tariff classification and valuation that will be put on imported goods by customs appraisers. In the case under consideration, the Tariff Act of 1922 had only recently been put into effect, and there were many uncertainties both as to its technical administration and as to changes in rates that might be made under the flexible provisions of the act. While such changes were probably remote in the case of the travel book under consideration, nevertheless, it was a factor to be considered in setting the price of the first book of a series of books to be issued by the publishers.

A more important cost risk in importing results from possible variations in exchange rates. For this particular purchase the exchange risk had been eliminated by setting the value of the franc at 6 cents.

This would not apply, however, to succeeding purchases of the same or similar books. Since at the time the purchase was made the French franc was exceedingly unstable, it is possible that the low purchase price of the book was due to the rapid fall in value that the franc had been undergoing. Even if the exchange value of the franc remained stable, adjustments in France of internal prices in reference to external prices might well result in increased prices for future purchases of the book.

Transportation costs are also subject to greater fluctuation in overseas trade than in domestic, but this would have little influence in the present case. An importer also usually would have greater difficulty, and be subject to greater expense, in enforcing the terms of a contract made abroad if there were any violation of its terms.

In view of all these elements of risk in determining import landed costs, the Grossland Book Company could well establish a higher percentage mark-up on its foreign-purchased books than on its domestic. From the terms of the problem it is apparent that the customary 40% gross margin was based upon domestic experience rather than on import experience. During 1923, all the factors making importing risks unusually severe were present.

There are two other factors, however, that need to be taken into consideration; and these are mutually opposed. First, the fact that the printed pages and illustrations were of such high quality that apparently the finished book was comparable to books selling as high as \$5 suggests that the higher retail price could have been secured. That the higher price would not have influenced sales, however, is apparently disproved by the company's experience as related in the concluding paragraph. It should be noted also that the company desired to counteract the impression that it sold only expensive books.

The second factor is the possible competition to be had from the English edition. If we assume that the implication in the problem is correct, that with the \$3 price on an American edition, the English edition, although more cheaply bound, would be imported in competition with the Grossland Book Company's edition, then the company could not set a price materially higher than the quality of the American edition in comparison with the English would warrant. The price set, namely, \$2.50, does not take into consideration, however, the superior quality of the American binding. It would seem, therefore, that the company might well have set a price that would realize a higher gross margin on its imported product and at the same time meet the competition of the British edition because of the better quality of its binding. There probably was little to fear from American competitors' copying the text, since the illustrations could not be reproduced. A retail price

between \$2.50 and \$3—say \$2.75—would seem to be justified in this instance. This view is strengthened by the intention of the publishers to issue a series of similar tourists' books with a uniform price: hence, the desirability of having the first price set at a point that would insure adequate profits on succeeding editions.

At this point, however, the feeling of the book trade that a price between \$2.50 and \$3, while a possible price, was not a good book price, must be considered. If this tradition of the trade had to be upheld, the choice between \$2.50 and \$3 would seem to have been chiefly influenced by the publisher's desire to have lower-priced books on his list. Under the conditions, however, there seems to be no strong reason why the price of this imported volume should not have been placed at \$2.75, thus giving the publisher both a low-priced book and adequate protection against the risks of importing and price changes as they existed in 1923.

October, 1925

G. B. R.

PENSACOLA IRON WORKS¹

COMPANY STORE—*Request to Establish, to Lower Cost of Living.* During the period of high prices in the early part of 1920, a committee representing its employees requested the company to establish a company store as a means of lowering the cost of living. The company's factory was located on the outskirts of a city in which there were about a dozen retail grocery stores which were operating under typical conditions.

(1920)

The Pensacola Iron Works, which employed about 2,000 men in a closed shop, was requested by a committee of employees in January, 1920, to establish a store² for the sale of food products.

¹ Fictitious name used for purpose of disguise.

² Numerous company stores of this sort had been established during the immediately preceding years by industrial and public service companies. The Interboro Rapid Transit Company, for example, established a store in New York City which was successful for a few months, but which thereafter lost its patronage, and the company closed it. The American Woolen Company, according to published statements, established a store at its mills in Lawrence, Massachusetts, in 1919, in order to reduce the cost of living for its employees.

Both these cases were examples of stores operated on plans similar to that proposed by the employees of the Pensacola Iron Works. Another type of organization for the same general purpose was outlined in the following announcement, published May 2, 1920:

Tomorrow morning the employees of the General Electric Company will start to cut the high cost of living substantially when the General Electric Employees' Cooperative and Collective Buying Association of Lynn begins to sell merchandise and commodities to the workers at the big Lynn plant.

This new corporation, which filed its papers at the State House last week, has a capitalization

At the time this request was made, prices of practically all commodities in retail stores were far higher than they had been at least for a generation. Public discontent with the high cost of living was general, and numerous profiteering investigations were under way. Demands for higher wages, to keep up with rising prices, were being made constantly by workingmen, and strikes, both of union and of non-organized employees, were of frequent occurrence in many localities. So far as the managers of the Pensacola Iron Works were aware, there were few grievances, other than the cost of living, among the company's employees. The company had orders on its books large enough to keep its plant in operation for a period of six months, and if an adequate force of employees could have been secured and railroad transportation provided, large additional orders for prompt delivery could readily have been obtained. It was proposed by the committee of employees that merchandise should be sold in the company's store at prices which would cover the wholesale cost plus the actual operating expenses of the store. The Pensacola Iron Works was to assume the responsibility for the management and operation of the store.

The plant of this company was located in the southern part of a city of 25,000 population. There were good street-car connections between the plant and other parts of the city. The store, if opened, was to be located close by the manufacturing plant or in one of its warehouses. Few of the company's employees lived in close proximity to the plant. There were about a dozen retail grocery stores in the city, operating under typical conditions.

COMMENTARY: This case reflected the unrest prevalent among employees during a boom period which preceded a business crisis. Through

of \$100,000, selling at \$10 a share exclusively to employees of the General Electric Company. Nearly every share has been purchased by the workers and great enthusiasm over the new enterprise exists.

All the corporators are employees of the company and have sole direction, supervision, and control, subject to the shareholders, who similarly are employees. The officials of the General Electric Company have nothing to do with the new corporation, though they have heartily sanctioned the plan and have granted the use of sufficient space for the stores in one of the buildings.

Overalls will be placed on sale tomorrow morning. Other articles of clothing, such as shoes, suits, underwear, shirts, and similar goods, will be for sale at the cooperative stores beginning May 10. This corporation has agreed to handle only articles of clothing and wearing apparel.

The selling of food supplies will be handled by another cooperative corporation, also of employees, to be incorporated shortly. It will be operated under the direction of the Metal Trades Council of the General Electric Company and will have a total capitalization of \$5,000, with shares selling at \$5 each to employees. This organization will deal exclusively in food necessities.

See also Thomas, Leon I., "Putting a Store in Your Factory," *Factory*, September 1, 1920, pp. 687-690; September 15, 1920, pp. 863-867; October 1, 1920, pp. 1060-1064.

the lack of understanding of general business conditions, the employees and many other persons placed the blame for high prices unintelligently on retailers.³ The company naturally desired to comply with this request, not only because of the possibility that such compliance might allay discontent but also because it might avert demands for higher wages.

The reasons for not granting the request, however, were stronger than those in its favor. A store located at the factory would not have been readily accessible to the wives of the employees, and it was not to be expected, therefore, that when the novelty had worn off such a store would receive large patronage from the employees and their families. If the merchandise in the store were to be priced at cost plus operating expenses, the saving to the employees would have been small; the retail grocery stores in the city were operating under typical conditions and even in 1919 the rate of net profit in a typical retail grocery store was small.⁴ The small amount of the saving to be realized might have caused serious disappointment to the employees and criticism of the company. If a period of unemployment were to occur subsequent to the opening of the store, the company would have been faced by demands for extending credit to its employees. Should the extension of credit have been refused, the burden would have been thrown upon the stores whose business had been cut into during the period of prosperity. The final reason for not complying with the request was that the condition occasioning the request was temporary, and if a store had been established, the stock of merchandise would have been purchased at peak prices, with a certainty of severe inventory losses when prices fell after the collapse of the boom.

This case illustrates one set of conditions under which the establishment of a company store is not advisable.

February, 1926

M. T. C.

³ See Copeland, Melvin T., "Profiteering and Prices," *Atlantic Monthly*, April, 1921, Vol. CXXV. No. 4, pp. 524-527.

⁴ Bureau of Business Research, Harvard University, *Bulletin No. 18, Operating Expenses in Retail Grocery Stores in 1919*, p. 10.

ALMA COAL CORPORATION¹

MINING COMPANY—COAL

COMPANY STORE—*Price Policy in.* A coal mining company operated five retail stores at which its employees purchased mining equipment and mer-

¹ Fictitious name used for purpose of disguise.

chandise for family use. Local competition was of little influence. The company's employees were not members of a labor union. When wage rates were reduced, the company reduced the rate of mark-up on merchandise in its company stores. When wages were increased, prices in the stores gradually were increased to yield high net profits.

(1922)

At each of the five operations or groups of mines of the Alma Coal Corporation, a company store had been established to supply merchandise to the employees which otherwise would not have been available; there were no towns of any size accessible to the mines. The stores were expected to yield a profit to the corporation, but the prevailing wage scale at the mines had been treated as an important factor in determining the retail prices.

The wage scale in effect October, 1920, was the highest in the corporation's history. Since its operations were strictly non-union, it was able to reduce wages in July, 1921, October, 1921, and March, 1922,² whereas the scale at union mines remained unchanged. In September, 1922, because of the successful strike in the union fields, the corporation raised the wage scale to that of October, 1920. Coincident with the wage reduction in March, 1922, the margin of profit in the stores was lowered. When it became necessary to increase the wage scale again, it was decided to advance gradually the retail prices of merchandise in the stores. No distinction was made between the personal and household purchases of an employee and his purchases of mining equipment, such as overalls, caps, lamps, picks, shovels, and explosives.

The total sales, the percentages of gross profit, total expense, and net profit, the percentages of total sales to total pay-roll, and the percentage of scrip sales to labor pay-roll in the 5 stores for the 9 months' periods ending September 30, 1920, 1921, and 1922 were as shown in Exhibit 1. Scrip sales were those for which the purchaser paid in scrip or company token money. This money came in different sizes, with the value it represented and the name of the corporation stamped on it. Miners were permitted to draw scrip against their balances on the cashier's books previous to pay day.

² The maximum wage scale in March, 1922, was about 35% below that in effect October, 1920. For different classes of mine labor, the reductions were approximately as follows: machine mining, 30-35%; machine cutting, 33-35%; slate yardage, 36-40%; underground labor, 32-45%; outside labor, 37-45%.

EXHIBIT I

SALES, PROFITS, AND EXPENSES, IN FIVE COMPANY STORES OF ALMA COAL CORPORATION, NINE MONTHS ENDING SEPTEMBER 30

	1920	1921	1922
Total Sales.....	\$1,291,112	\$1,083,722	\$900,903
Gross Profit.....	22.3%	22.7%	16.7%
Total Expense*.....	8.8	10.2	11.8
Net Profit.....	13.5	12.5	4.9
Percentage Total Sales to Total Pay-Roll.....	47.02	37.73	40.21
Percentage Scrip Sales to Labor Pay-Roll.....	29.09	24.67	28.76
Stock-turn for Period.....	2.1 times	2.1 times	2.3 times

*The items of expense which appeared on the profit and loss statements of the stores operated by the Alma Coal Corporation were:

Salaries	Heat	Drayage	Other Expense
Rent	Insurance	Taxes	Miscellaneous Labor
Light	Depreciation	Losses from	Coupon Books
		Bad Debts	

There were two independent retail stores at each of four of the operations and one independent store at the fifth operation. The company had experienced little competition from these stores, which carried small stocks of cheap merchandise. Mail-order houses, however, had secured many orders from the company's employees; the manager of the company's stores in November, 1922, believed that this competition was decreasing because of the fewer number of parcels taken from the post-office.

The problem presented in this case was whether the Alma Coal Corporation should have endeavored to make a large net profit on the operations of the company stores or have taken only sufficient margin to cover expenses and to protect itself against a declining merchandise market.

COMMENTARY: Unlike the case of the Pensacola Iron Works,³ the question of establishing company stores was not an issue in this case; the localities in which the Alma Coal Corporation carried on its operations afforded little opportunity to its employees for making retail purchases locally until the company opened its stores. The question presented in this case related to the propriety of the company's adjusting the prices in its retail stores to take advantage of wage increases. It is significant that in 1920 and 1921, when many retailers suffered losses, this company obtained large net profits in its stores.

³ See page 201.

The chief merit of the company's policy was to increase the earnings of the company, or to aid in maintaining its earnings when higher operating costs were forced upon it by increases in wage rates in the union mining districts.

This situation was one, however, in which factors other than the immediate effect on the company's earnings deserved consideration. The stores had been established as a convenience for the employees. The company enjoyed at least a partial monopoly of the retail trade in each locality in which it operated a store; the chief limitation on its monopoly was the competition of distant mail-order companies. Such monopolistic control implied an obligation to treat its employees squarely and to operate the stores on a normal merchandising plan, whereas the company's practice of offsetting wage increases by raising prices in the retail stores smacked of chicanery. The jockeying of prices in company stores, sometimes called the "truck system," long has been looked upon with disfavor by disinterested persons. In this case, therefore, the company was following a practice which could not have been made public without arousing hostility among its employees and adverse criticism from a much broader community. The company's practice of endeavoring to obtain an abnormally large net profit on the operations of its retail stores was not commendable.

February, 1926

M. T. C

SALSON ELECTRIC COMPANY¹

PUBLIC UTILITY—ELECTRIC LIGHT AND POWER

RATE SCHEDULES—*Change from Step Type to Block Type.* A company selling electric light and power found the step type of rate which it was using cumbersome, confusing to customers, and inconsistent, and adopted a block type of rate schedule. The company's object was not to increase total revenue or to redistribute costs among classes of customers.

COAL CLAUSE—*Company's Charges to Vary with Its Costs.* An electric light and power company which purchased most of its electricity from a large power company, in adopting a new rate schedule, added a coal clause which provided that the company's charges to customers, under the coal clause, would follow variations in coal charges which the company paid to its supplier.

DISCOUNT FOR PROMPT PAYMENT—*Discontinuance of.* In adopting a new schedule of rates, an electric light and power company discontinued the provision in its former rate allowing a discount of 10% on all bills paid

¹ Fictitious name used for purpose of disguise,

within 10 days after date. The company believed that with its customers an incentive to prompt payment was unnecessary.

(1922)

The Salson Electric Company rates were of the step type. A company using a step type rate schedule charged a flat rate to each customer for all the current which he used. The total quantity of current consumed determined the rate. At each increase in the quantity of current consumed above specified points the rate decreased. Under the step type rate it was possible for a customer to decrease his total bill by increasing his energy consumption. For example, according to the company's power schedule the rate was 2.75 cents per kilowatt-hour for between 3,000 and 3,999 kilowatt-hours of current per month and 2.50 cents per kilowatt-hour for between 4,000 and 4,999 kilowatt-hours of current per month. The charge, therefore, for 3,996 kilowatt-hours per month was \$109.89 and for 4,000 kilowatt-hours per month \$100. Step rates were cumbersome, confusing to customers, and inconsistent. In December, 1922, the company wanted to revise them. It did not seek to increase total revenue or to redistribute costs among classes of consumers. The company employed a consulting engineer to study the existing schedules and to recommend changes.

The Salson Electric Company supplied electric light and power in Salson and in contiguous territory; the total population served was approximately 30,000. The company purchased about 75% of its electricity from the Westford Electric Company,² a large power company, and generated the remainder at its own plant.

EXHIBIT I

INCOME ACCOUNT, YEAR ENDED DECEMBER 31, 1921

Gross Revenue	\$308,000
Operating Expenses, Taxes, and Depreciation	<u>238,500</u>
Gross Income	\$ 69,500
Interest and Rentals	\$45,850
Dividends	<u>19,500</u>
	65,350
Surplus	<u>\$ 4,150</u>

² Fictitious name used for purpose of disguise.

The Salson Electric Company had \$480,000 in outstanding stocks and bonds. Total surplus was \$44,000; the company had added \$4,000 in each of the preceding three years. The company's relations with its customers were friendly. Its income account for the preceding year, ending December 31, 1921, is given in Exhibit 1.

The company's rate schedule for power service was as shown in Exhibit 2.

The lighting, refrigerating, and heating rates were graded similarly as tabulated in Exhibit 3.

The power rates recommended by the engineer were of the block type. Under a block type rate schedule a company charged a flat rate for the current consumed up to a specified point. A lower rate obtained for the quantity of current used above the first specified point and below the next specified point. For any quantity of current used above the second specified point a still

EXHIBIT 2
SCHEDULE OF POWER RATES, STEP TYPE

Quantity of Current		Rate per Kw-hr.
0 to	99 Kw-hr. Per Month	7.5 Cents
100 to	199 Kw-hr. Per Month	6.5 Cents
200 to	399 Kw-hr. Per Month	6 Cents
400 to	599 Kw-hr. Per Month	5.5 Cents
600 to	799 Kw-hr. Per Month	5 Cents
800 to	999 Kw-hr. Per Month	4.5 Cents
1,000 to	1,999 Kw-hr. Per Month	4 Cents
1,200 to	1,499 Kw-hr. Per Month	3.5 Cents
1,500 to	2,999 Kw-hr. Per Month	3 Cents
3,000 to	3,999 Kw-hr. Per Month	2.75 Cents
4,000 to	4,999 Kw-hr. Per Month	2.5 Cents
5,000 to	7,499 Kw-hr. Per Month	2.35 Cents
7,500 to	10,000 Kw-hr. Per Month	2.25 Cents

MINIMUM CHARGE: A minimum payment on motors of from 1 to 7½ horse-power will be required of \$1 per horse-power; from 7½ horse-power to 50 horse-power, 75 cents per horse-power; over 50 horse-power, 50 cents per month per horse-power.

The above rates for electric power are subject to the addition of a coal charge of 1 mill per kilowatt-hour for every dollar increase in price of coal above \$4 per ton at the bunkers of the Westford Electric Company.

Power customers using our power exclusively are permitted to use lighting from power meter, providing the lighting connected load does not exceed 20% of the total connected load and the customer furnishes transformers for such lighting.

The above rates are all subject to a discount of 10% if paid within ten (10) days from date of bill, except coal charge.

EXHIBIT 3

NUMBER OF CUSTOMERS AND SALES IN KILOWATT-HOURS BY CLASSES
OF SERVICE OF THE SALSON ELECTRIC COMPANY IN 1921

Class of Service	Number of Customers	Sales in Kilowatt-Hours
House Lighting (homes).....	2,362	394,242
Commercial Lighting (stores and factories).....	725	471,233
Municipal Lighting (city and town buildings)....	43	19,648
Flat Rate Lighting (signs, etc.).....	65	22,646
Heating and Cooking.....	76	85,627
Summer Lighting (part-year service).....	139	31,077
Power.....	236	2,446,222
Street Lighting.....		287,012
Electric Railway.....		343,627
	3,646	4,101,334

lower rate obtained. This process continued until the minimum rate applied to any additional quantity of current used. Under a block type rate schedule a customer's total bill increased with each additional unit of energy consumed, but the average per kilowatt charge decreased. The recommended power rate schedule was as follows:

RECOMMENDED SCHEDULE OF BLOCK RATES FOR POWER

Availability—Available to customers who use the company's standard service for general motor operation, charging storage batteries, commercial cooking and heating, operating moving-picture machines, and for a limited amount of industrial lighting to customers who have a connected load of 50 kilowatts or over.

Service—Alternating current will be supplied by the company, either single phase or 3 phase, at approximately 60 cycles, 110, 220, or 2,300 volts, at the company's option.

Equipment—All equipment and apparatus necessary to change the company's high tension service to the form required for power and lighting by the customer shall be furnished and maintained by the customer, who shall also balance the current on each phase of the lower circuit in a manner satisfactory to the company.

Rate (block)—First 100 kilowatt-hours per month at 6.7 cents net per kilowatt-hour.
 Next 300 kilowatt-hours per month at 4.7 cents net per kilowatt-hour.
 Next 600 kilowatt-hours per month at 2.8 cents net per kilowatt-hour.
 All over 1,000 kilowatt-hours per month at 1.8 cents net per kilowatt-hour.

Minimum Rate—The minimum net average rate for any month under the above schedule shall not be less than 2 cents per kilowatt-hour.

Fuel Charge—The fuel charge per kilowatt-hour sold for power shall

be determined by dividing the fuel charge paid the Westford Power Company in any month by the power kilowatt-hours sold by the Salson Electric Company during the same month. Stated as a formula this is as follows:

$$\text{Fuel Charge per kilowatt-hour} = \frac{\text{Fuel Charge paid Westford Power Company in any month}}{\text{Power kilowatt-hours sold by Salson Electric Company same month}}$$

Such adjustments shall be based on the fuel charge and kilowatt-hour sold for power during the calendar month immediately preceding the date of the bill.

Lighting—Current for lighting purposes may be taken from the company's unregulated power circuits and purchased under the power rate, provided that any amount in excess of 15% of the monthly consumption of current for power purposes shall be paid for at the regular lighting rate of the company at that time in force.

<i>Minimum Charge</i> —First	7½ h.p.	\$1.00 net per h.p. per month
	Next 42½ h.p.	.75 net per h.p. per month
	All over 50 h.p.	.50 net per h.p. per month

Power Factor—The customer agrees that the average power factor of its load during any 15-minute period shall not at any time be less than 80%. If the power factor of the load is found by test to be less than 80%, the customer agrees to install, at his expense, such additional apparatus as may be necessary to raise the power factor to at least 80%. The company reserves the right, from time to time, to install such apparatus and make such tests as may be necessary to determine the power factor.

Payment—Bills are due and payable when rendered.

Term of Contract—A contract under this schedule shall continue in force for one year from the date of signing thereof, and shall at the expiration of that time automatically renew itself for successive periods of one year each, unless terminated by either party giving to the other notice in writing thirty (30) days prior to the expiration of any contract year or renewal thereof.

Similar changes were recommended in the other rates.

On the basis of 1921 consumption, it was estimated that the proposed lighting rate would produce an increase in gross revenue of \$470.77, or approximately 1.52%; most of this increase would be borne by long-hour users. The proposed power rate was expected to produce an increase of \$1,096.77 in gross revenue, of which \$127.65 would be received from customers billed under the scheduled rates of the company and \$969.12 from customers served under special rate contracts. Upon expiration of these contracts, the customers would be supplied under the scheduled

rates. The change in the rate for domestic service would produce practically no change in revenue.

The existing and proposed rates differed chiefly in that the former were of the step type and the latter of the block type. The relation between the existing power rate and the proposed power rates is shown in Exhibit 4.

The proposed rates were net prices; the 10% discount for prompt payment of lighting bills was to be discontinued. The company's relations with its customers were such that this incentive to prompt payment was unnecessary. Although the proposed rates, which were net prices, appeared to effect a reduction in the maximum lighting rate, the actual rate changed but slightly from the former rates to which the discount had applied.

The existing power rate contained a rigid coal clause which did not follow exactly the variations of the coal charges paid to the Westford Electric Company. Under the proposed power rate, the total amount paid by the Salson Electric Company under the coal charge would be distributed over all kilowatt-hours sold for power. The power factor clause in the power rate was included to protect the company, but enforcement was optional. Under

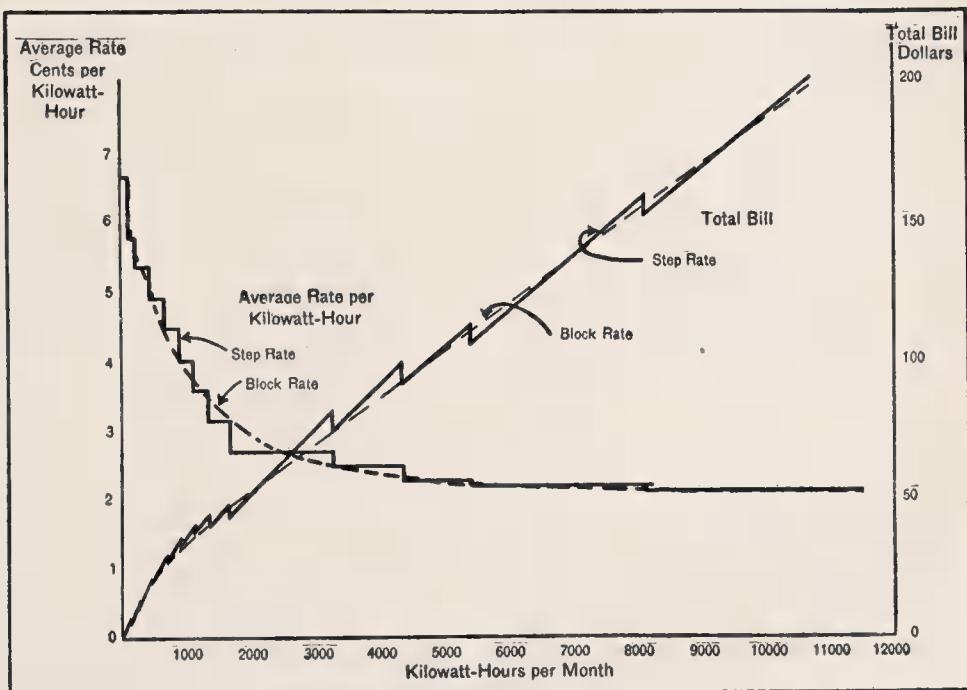


Exhibit 4: Comparison of the Salson Electric Company's existing step rate and proposed block rate for power service.

the existing power rate, 20% of a customer's connected load was allowed to be lighting load; the new rate changed this to 15% of the energy consumed.

The new rate schedule provided for automatic yearly renewal of contracts, was simpler than the existing schedule, and was in line with the modern trend of rate-making. The existing rates, however, produced sufficient revenue, were satisfactory to the customers, and were not so seriously unsound as to hamper the company's growth. The company favored a power rate on a demand basis, namely, a rate designed so that the customer would be charged an amount proportionate to his maximum demand, and in addition an amount proportionate to his energy consumption. The company had no data pertaining to customers' demands, however, and it was impossible to design such a rate satisfactorily without definite records. The company did not expect serious objections to the new rates, because the change would reduce slightly a large majority of the customers' total bills. The company's total gross revenue, however, would not decrease, because the total bills of the users of large quantities of current would increase slightly.

The company adopted the block rates recommended, effective March, 1923. The reasons for the changes were explained to the customers by printed notices enclosed with the monthly bills. No serious objection was made to the new rates.

COMMENTARY: The significance of this case is to indicate the principles of sound merchandising in an electric light and power company. The step rate used by the Salson Electric Company up to 1922 was an early and amateurish effort to imitate standard merchandising practice. It was a rough form of discount for quantity, which wholly overlooked the element of turnover, or what is called load factor in the electric industry. The actual relations of the buyer and the seller are very similar in all industries, but this is sometimes obscured by the use of technical terms. For example, what the public utility rate-maker calls high load factor is known to the merchant as rapid turnover. A short hour, or peak, load is slow turnover because in both cases the demand for these goods is seasonal or intermittent. An off-peak load is a bargain sale, and so on through the whole rate schedule.

The early step rate was superseded by the block rate, a less crude form, but still open to the objection that it gave the large customer

with an intermittent use a lower price than the small customer whose use was constant.

The Hopkinson and the Wright rate forms³ were devised to meet this problem. Both are load factor rates, the main difference being that the Hopkinson rate is a two-part rate under which the customer must pay the demand charge even if no current at all is used. The Wright rate avoids this objection by smothering the demand charge in the high first block. Some public utility rate experts consider this better customer psychology.

These two forms of rate are mainly used in the wholesale or large power field because for small customers of either light or power the measurement of the demand is too expensive or too troublesome.

In the lighting or domestic field, however, a load factor rate known as the room, or area, rate is now coming into use which has the same objective as the Hopkinson and Wright rates—namely, to encourage the small but constant buyer. It is either a two-part rate consisting of a monthly charge per room or per square foot of house area plus an energy charge at a low rate per kilowatt-hour for current used or a Wright demand rate using area as the unit of demand. In some districts it has met with marked success.

The interesting problem of marketing involved in these load factor rates is due to the fact that, owing to the fixed demand charge in the Hopkinson and area rates and the high first block in the Wright rate, the cost to the customer of current per kilowatt-hour actually used rises as his use falls. For example, a power customer with a 5,000-kilowatt demand and a normal use of 1,000,000 kilowatt-hours per month might be served under a rate schedule providing for a monthly charge of \$2 per kilowatt of maximum demand per month plus an energy charge of 1.25 cents per kilowatt-hour. Under this rate, when his mill was in full operation, his monthly bill would be about \$22,500, or 2.25 cents per kilowatt-hour. If his mill were run on half-time so that he used only 500,000 kilowatt-hours per month, his price per kilowatt-hour would rise to 3.25 cents, and if his mill were shut down and

³ The Hopkinson demand rate imposes on the customer a fixed charge of, say \$20 or \$30 per year per kilowatt of maximum demand. This is designed to cover most of the fixed charges on the equipment of the electric company held in readiness to serve this customer. It is sometimes called a "readiness-to-serve" charge, and is billed in monthly instalments. To this is added an energy charge for current used which may be either at a flat rate of, say 1.25 cents per kilowatt used, or may be a block rate, 1.75 cents per kilowatt-hour for the first 100,000 kilowatt-hours monthly, 1.50 cents for the next 300,000 kilowatt-hours, and the excess at 1 cent, for example.

The Wright demand rate is a block rate in which the first block is short but high priced. A typical Wright rate would be: 10 cents per kilowatt-hour for the first 30 hours' use per month of the maximum demand, 6 cents for the next 30 hours' use, and 4 cents for all over 60 hours' use per month.

he used no power, his monthly demand charge of \$10,000 would raise his cost per kilowatt-hour to infinity. This is likely to irritate the average manufacturer notwithstanding the fact that the rate is fair, scientific, and economically sound because the electric company has made the investment for his use and has it standing idle. This problem may be partly, though not wholly, solved by the Wright rate under which the rate per kilowatt-hour rises as consumption falls, but where only a nominal minimum charge is made when no energy is used.

The real merchandising problem for the utility rate-maker in the power field is whether he can stand out against the pressure of the business cycle with the attendant variations in customers' demands. Other merchants give way. Can he stand the strain? It seems doubtful.

The use of the area rate in the domestic field raises a different question. Under this rate, too, the price rises as the use falls off, but the fluctuation in use is seasonal and not cyclical. Domestic use may fall off in summer, but it is almost unaffected by the business cycle. In this field, therefore, it seems likely that the fairness and economic soundness of the load factor rate, backed up by skilful selling, will ultimately win.

June, 1926

P. C.

LAKESIDE STREET RAILWAY COMPANY¹

PUBLIC UTILITY—STREET RAILWAY

STREET RAILWAY FARES—*Increased to Meet Operating Expenses.* Decreases in its volume of traffic, resulting from a business depression and a growing use of automobiles, and an award increasing wages of its employees, increased the rate of fare which a street railway company needed in order to meet operating expenses. The company contemplated replacing its 7-cent fare with an 8-cent fare but decided to adopt a cash fare of 10 cents with a ticket rate of 3 tickets for 25 cents, because this latter rate would produce more revenue than the former and would facilitate the collection of fares. The Public Utilities Commission sustained the company's decision.

STREET RAILWAY FARES—*Adjusted to Change-Making Requirements and Effect on Speed of Service.* A street railway company which was considering the adoption of either an 8-cent cash fare or a 10-cent cash fare with 3 tickets for 25 cents decided to adopt the latter tariff, partly because of the increased revenue it would afford, and partly because it practically would eliminate the use of pennies and thus, by facilitating change-making, increase the speed of service.

(1924)

¹ Fictitious name used for purpose of disguise.

In June, 1924, a board of arbitration made an award which increased the wages of all the employees of the Lakeside Street Railway Company. The company estimated that the increases in wages would amount to about \$235,000 a year. Since the board of arbitration had made its award retroactive to January 1, 1924, the company had to pay extra wages for the period from January 1 to June 28, 1924, totaling \$117,650. The company paid this amount from funds accumulated for repairs which the company was to have made on the railway during the summer months. It was necessary, therefore, to defer these repairs.

Because of a business depression and an increasing use of automobiles by all classes of people, the volume of traffic on the system was decreasing. The average monthly number of revenue passengers for the first 6 months of 1924 was 3,989,037, compared with 4,105,852 for the year 1923. The company's receipts during the first half of 1924 were approximately \$159,000 less than they had been during the corresponding period in 1923. To meet this situation, the company decided to increase fares, and to make a study in order to determine whether to change the existing 7-cent fare to a straight 8-cent fare or to charge 10 cents for a cash fare and 25 cents for 3 tickets.

Lakeside was a New England industrial community of about 125,000 population. The company owned and operated approximately 200 miles of track; its lines not only served Lakeside but also extended into 15 small communities. The company derived about 85% of its revenue from the city division, which operated on a central zone fare system. Since October, 1919, the company had charged a 7-cent cash fare for an intrazone ride. The company sold 9 long or 11 short interzone ride tickets at the special rate of \$1; these fares were at the rates of 11 $\frac{1}{9}$ cents and 9 $\frac{1}{11}$ cents per ride respectively. These 2 types of interzone tickets were composed of 2 coupons each. The company collected one coupon in each zone. The company sold 7 other types of special rate tickets for use on light traffic suburban lines; these lines were not important sources of revenue. The law fixed the fare for school children at one-half the regular cash fare.

Earnings had been sufficient to permit the company to pay a 2% dividend on the par value of its capital stock in 1920, a 3% dividend in 1921, and a 5% dividend in 1922 and in 1923.

COMPARATIVE INCOME STATEMENT OF LAKESIDE STREET RAILWAY COMPANY FOR YEARS ENDED DECEMBER 31
1922, AND DECEMBER 31, 1923

	1922	1923
Railway operating revenues.....	\$3,409,436.01	\$3,410,039.15
Railway operating expenses.....	2,685,585.84	2,814,835.07
Net operating revenue.....	\$723,850.17	\$595,204.08
Taxes assignable to railway operations:		
On real and personal property.....	\$ 41,091.90	\$ 37,730.06
On capital stock.....	6,895.41	28,382.56
Miscellaneous.....	62,236.91	44,468.79
Operating income.....		110,581.41
Miscellaneous rent income.....	\$ 354.00	\$484,622.67
Income from unfunded securities and accounts.	10,841.23	
Miscellaneous income.....	222.38	\$ 45.00
Total non-operating income.....	11,417.61	23,747.08
Gross income.....	\$625,043.56	\$508,369.75
Miscellaneous rents.....	\$ 340.80	\$ 340.80
Interest on funded debt.....	139,787.71	181,794.76
Interest on unfunded debt.....	29,656.71	24,612.50
Amortization of discount on funded debt.....	3,355.59	10,442.91
Miscellaneous debits.....	148.80	2,104.45
Total deductions from gross income.....	173,289.61	210,295.42
Income balance transferred to profit and loss...	\$451,753.95	\$289,074.33
Profit and loss balance, January 1.....	488,590.71	648,941.49
Profit on road and equipment sold.....		2,266.01
Miscellaneous credits.....	1,324.40	31,844.19
Dividends paid.....	\$941,669.06	\$972,126.02
Loss on road and equipment retired.....	\$232,735.00	\$232,735.00
Miscellaneous debits.....	59,889.12	61,612.75
	103.45	141.07
Profit and loss balance, December 31.....	\$648,941.49	\$677,637.20

The comparative income statement of the company for 1922 and 1923 was as shown on the opposite page.

Upon the basis of the number of passengers carried during the year ended July 31, 1924, the company prepared estimates of the probable revenue which would result from the adoption of an 8-cent fare, as shown in Exhibit 1, and from the use of a combination of a 10-cent cash fare and an 8 1/3-cent ticket fare, as presented in Exhibit 2. The company intended to raise the price of the short ride interzone tickets from 11 for \$1 to 10 for \$1, and of the long ride interzone tickets from 9 for \$1 to 8 for \$1, no matter which cash fare it adopted.

EXHIBIT 1

ESTIMATE OF REVENUE WHICH THE LAKESIDE STREET RAILWAY COMPANY WOULD RECEIVE FROM ADOPTION OF 8-CENT CASH FARE FOR THE CENTRAL ZONE, BASED ON PASSENGER TRAFFIC IN 12 MONTHS ENDED JULY 31, 1924

REGULAR ZONE FARES	Number of Fares	Estimated Revenue
Total number of passengers who paid 7-cent cash fares.....	38,571,168	
Estimated decrease of 5% in total number of passengers if fare increased.....	1,928,558	
Estimated total number of passengers who would pay 8-cent fares....	36,642,610	
Revenue from 36,642,610 cash fares at 8 cents.....		\$2,931,408.80
PUPILS' TICKETS		
Total number of passengers who used 3½-cent tickets.....	1,519,406	
Estimated decrease of 5% in total number of passengers if fare increased.....	75,970	
Estimated total number of passengers who would pay 4-cent fares....	1,443,436	
Revenues from 1,443,436 pupils' tickets at 4 cents.....		57,737.44
SPECIAL INTERZONE TICKETS (Short Ride)		
Total number of coupons collected from passengers who used 9 1/11-cent tickets.....	4,264,013	
Estimated decrease of 2½% in total number of coupons collected if fare increased.....	106,600	
Estimated total number of coupons which would be collected from passengers who would purchase 10 tickets for \$1 at the rate of 5 cents per coupon.....	4,157,413	
Revenue from 4,157,413 coupons at 5 cents.....		207,870.65
SPECIAL INTERZONE TICKETS (Long Ride)		
Total number of coupons collected from passengers who used 11 1/9-cent tickets.....	1,700,555	
Estimated decrease of 2½% in total number of coupons collected if fares increased.....	42,514	
Estimated total number of coupons which would be collected from passengers who would purchase 8 tickets for \$1 at the rate of 6¼ cents per coupon.....	1,658,041	
Revenue from 1,658,041 coupons at 6¼ cents.....		103,627.56
MISCELLANEOUS AND SPECIAL TICKETS		
Estimated revenue from 7 light traffic suburban lines to which special rates applied, reduced to 8-cent rate base.....		18,971.94
Estimated total receipts from 8-cent fare.....		\$3,319,616.39
Actual receipts from 7-cent fare.....		3,061,329.41
Probable net gain.....		\$ 258,286.98

In preparing these schedules, it was necessary for the company to make arbitrary estimates of the probable traffic loss which would result from increased fares and of the proportion of passengers who would use 8 1/3-cent tickets. Data secured from other companies indicated that an increase in fare almost never produced a proportionate increase in revenue. In a near-by

EXHIBIT 2

ESTIMATE OF REVENUE WHICH THE LAKESIDE STREET RAILWAY COMPANY WOULD RECEIVE FROM A CHARGE OF 10 CENTS FOR A CASH FARE AND 25 CENTS FOR THREE TICKETS IN THE CENTRAL ZONE, BASED ON PASSENGER TRAFFIC IN 12 MONTHS ENDED JULY 31, 1924

	Number of Fares	Estimated Revenue
REGULAR ZONE FARES		
Total number of passengers who paid 7-cent cash fares.....	38,571,168	
Estimated decrease of 5% in total number of passengers if fare increased.....	1,928,558	
Estimated number of passengers who would continue to ride.....	36,642,610	
Estimated number of passengers who would use 8 1/3-cent tickets, or 96% of total.....	35,176,906	
Estimated number of passengers who would pay 10-cent cash fares, or 4% of total.....	1,465,704	
Estimated revenue from 35,176,906 tickets at 8 1/3 cents.....		\$2,931,408.83
Estimated revenue from 1,465,704 cash fares at 10 cents.....		146,570.40
PUPILS' TICKETS		
Total number of passengers who used 3 1/2-cent tickets.....	1,519,406	
Estimated decrease of 5% in total number of passengers if fare increased.....	75,970	
Estimated total number of passengers who would pay 5-cent fares..	1,443,436	
Revenue from 1,443,436 pupils' tickets at 5 cents.....		72,171.80
SPECIAL INTERZONE TICKETS (Short Ride)		
Total number of coupons collected from passengers who used 9 1/11-cent tickets.....	4,264,013	
Estimated decrease of 2 1/2% in total number of coupons collected if fare increased.....	106,600	
Estimated total number of remaining coupons which would be collected from passengers who would purchase 10 tickets for \$1 at the rate of 5 cents per coupon.....	4,157,413	
Revenue from 4,157,413 coupons at 5 cents.....		207,870.65
SPECIAL INTERZONE TICKETS (Long Ride)		
Total number of coupons collected from passengers who used 11 1/9-cent tickets.....	1,700,555	
Estimated decrease of 2 1/2% in total number of coupons collected if fare increased.....	42,514	
Estimated total number of coupons which would be collected from passengers who would purchase 8 tickets for \$1 at the rate of 6 1/4 cents per coupon.....	1,658,041	
Revenue from 1,658,041 coupons at 6 1/4 cents.....		103,627.56
MISCELLANEOUS AND SPECIAL TICKETS		
Estimated revenue from 7 light traffic suburban lines to which special rates apply, reduced to 8 1/3-cent ticket base.....		19,638.17
Estimated total receipts from 8 1/3-cent rate.....		\$3,481,287.41
Actual receipts from 7-cent fare.....		3,061,329.41
Probable net gain.....		\$ 419,958.00

city a similar fare increase made a short time before had resulted in an 18% decrease in passenger traffic. When the Lakeside Street Railway Company had increased its fare from 5 cents to 6 cents and later from 6 cents to 7 cents, traffic had decreased approximately 10%. It was believed, however, that other factors than the changes in fare were mainly responsible.

The company expected about the same loss of traffic from an increase in fare to 8 cents as from an increase to $8\frac{1}{3}$ cents. The company deemed that 5% was a fair estimate of the probable decrease in central zone traffic whether the company raised the fare to 8 cents or to $8\frac{1}{3}$ cents; these were increases of 14.3% and 19%, respectively. The company expected only about a 2.5% decrease in the two special classes of interzone traffic. Since the company intended to increase the charge for one type of interzone ticket 10% and for the other 12.5%, and since, in addition, the interzone rides were longer than the intrazone, it was logical to expect a smaller decrease in interzone than in intrazone traffic. Although the fare for school children would increase 14.3% with a straight 8-cent fare and 42.9% with a 10-cent cash and $8\frac{1}{3}$ -cent ticket fare, the company estimated that pupil traffic would decrease only 5% since most of these passengers rode from necessity.

The company assumed that if it adopted the $8\frac{1}{3}$ -cent rate, 96% of the intrazone passengers would purchase the reduced rate tickets at 3 for 25 cents, and that 4% would pay the 10-cent cash fare. The company based this estimate on the experience of a near-by street railway company which a short time before had changed its ticket rate from 2 for 15 cents to 3 for 25 cents. During the first 4 months of operations under the new rate, the proportion of passengers using tickets varied between 95.4% and 96.3%. The executives of the Lakeside Street Railway Company believed that conditions before it were substantially the same as those under which the near-by company had increased rates.

The estimates of revenue from the 2 rates indicated that the 8-cent fare would increase annual revenue approximately \$258,000, and that the $8\frac{1}{3}$ -cent rate would increase it approximately \$420,000. The 8-cent fare would furnish sufficient extra revenue to meet the additional wage charges of \$235,000, but

not to compensate for loss of revenue caused by the decline in the volume of traffic.

Since the existing fare boxes were adapted to the collection of nickels and pennies, an increase in fare from 7 cents to 8 cents would result in almost no additional expense to the company. On the other hand, the adoption of the 10-cent cash fare and 8 1/3-cent ticket fare system would necessitate the printing of tickets at an estimated annual expense of \$5,800, and the installation in the central zone cars of 150 new lock type fare boxes at \$70 each, since the boxes which the company had were not suitable for the collection of tickets.

If the company accepted the 8 1/3-cent fare plan, passengers were to obtain tickets from the conductors; the company, however, would not require a conductor to sell more than three tickets at one time to a passenger. The use of tickets or the payment of 10-cent cash fares practically would eliminate the use of pennies and thus would reduce change-making. The time required for the collection of fares affected the speed of service and hence the expense of operation, particularly that of one-man cars. The company used this type of car for about 30% of the total car mileage.

The executives realized that newspapers and civic and political organizations would oppose any increase in street railway fares, and that the company would have to present its case at hearings before the Public Utilities Commission. In all probability, the adoption of a 10-cent cash fare and 8 1/3-cent ticket fare, with an increase of approximately 42.9% in pupils' fares, would be more unpopular than the adoption of a straight 8-cent fare, especially among civic organizations interested in the schools.

The Lakeside Street Railway Company decided, nevertheless, to adopt the system involving a charge of 10 cents for a cash fare and 25 cents for 3 tickets, because the executives expected these rates to yield more revenue than a straight 8-cent fare and to permit the improvement of the service through the facilitation of fare collections. Representatives of various civic organizations opposed the new rates at hearings before the Public Utilities Commission.

In September, 1924, the Public Utilities Commission, however, approved the new tariff, and stated in part:

In view of the conditions that confront the company, we are of the opinion that the proposed rate of 10 cents, cash fare, with 3 tickets for 25 cents, is a reasonable rate of fare. It is hoped that the situation will so improve in Lakeside that the rates of fare may be modified. But in view of the uncertain conditions that are likely to obtain in the next 6 months, we think it unwise in the interests of the people of Lakeside to reduce a fare which they may obtain for $8\frac{1}{3}$ cents by the purchase of 3 tickets to an 8-cent cash fare, which if conditions continue as they now exist will fall short of the company's necessities. Moreover, we think a provision for tickets is desirable, as it will tend to eliminate the time taken in making change and will result in speeding up the service and tend thus to decrease operating expenses. It is to be observed that in the event that conditions change so as to warrant the application of an 8-cent fare in place of an $8\frac{1}{3}$ -cent fare, application to the department can at any time be made.

COMMENTARY: This is an interesting situation, common in the street railway business, in which a decreasing demand is met by an increasing rate. This practice is just the opposite to that in every other business and is caused, perhaps, by attempting to fix street railway rates to suit the general public rather than to have them fixed between the buyer and seller. This is a short-sighted policy which has placed an essential agency at the mercy of its competitors because it is unable or unwilling to furnish the character of service which its customers demand.

October, 1925

T. H. D.

POWHATAN VALLEY RAILROAD¹

RAILROAD—SILICATE

RAILROAD RATES—*Request for Reduction Granted—Encouraging Shipments in Light Traffic Direction.* At the request of a chemical company, a railroad decided to make a reduction in its rate on silicate to a station which was not entered by the line of any other railroad. The railroad was convinced that the shipper's contention that the existing rate was unreasonable in view of other rates in effect was ill-founded and that the reduced rate would afford but a narrow margin above the out-of-pocket traffic costs, but the reduced rate would bring traffic in the light traffic direction and would use cars otherwise being hauled empty.

(1924)

The Burfen Chemical Company¹ had a plant at Verona, an eastern tidewater city located 11 miles south of Bruceton, a

¹ Fictitious name used for purpose of disguise.

manufacturing and commercial center with a population of more than a million. The company marketed its products throughout New England, the Atlantic states, and the Middle West.

In 1924, the Burfen Chemical Company contemplated marketing silicate at Remington, which was 32 miles south of Verona. Although three railroads entered Verona, only one, the Pow-

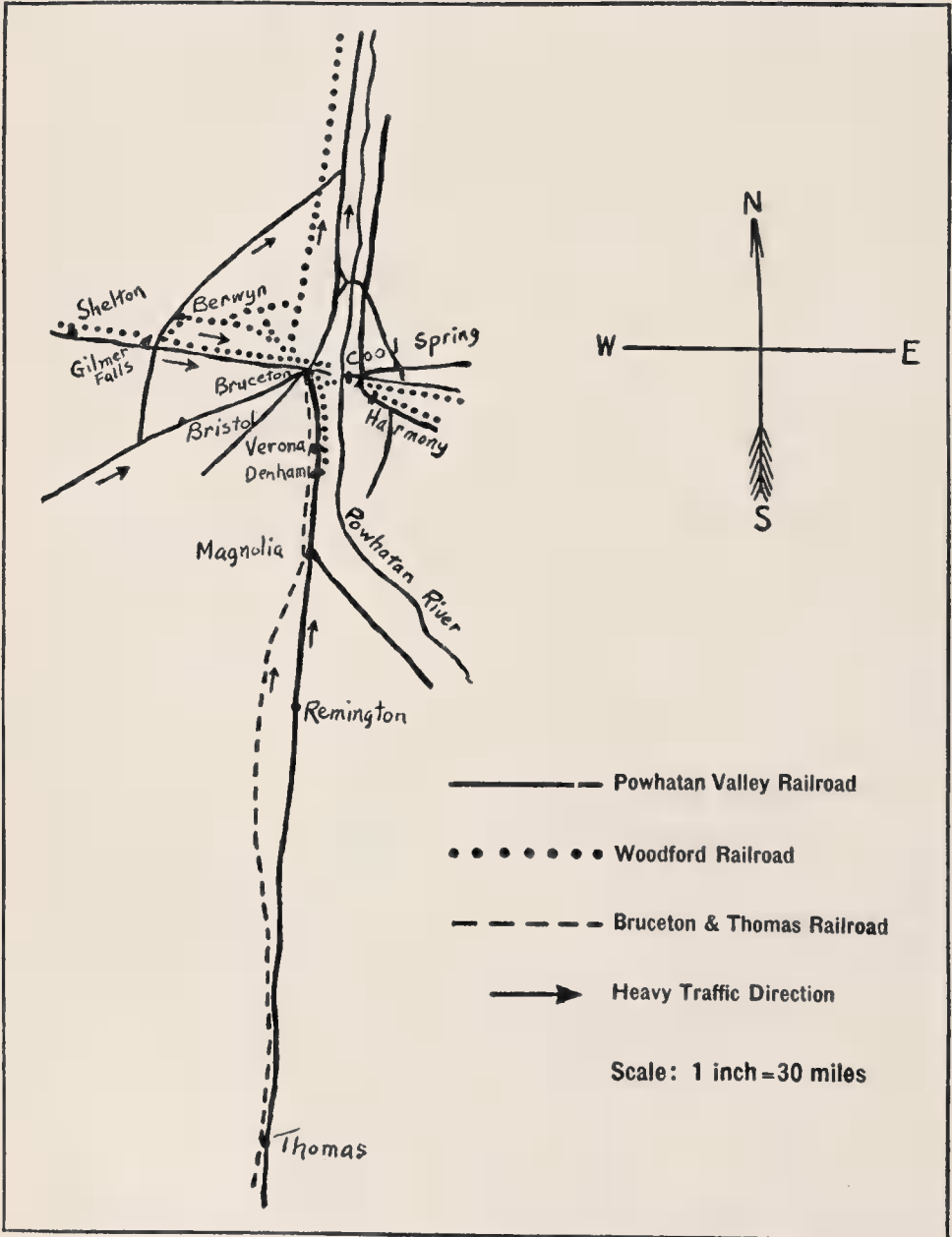


Exhibit 1: Portion of area served by Powhatan Valley Railroad.

hatan Valley Railroad, reached Remington, as shown by Exhibit 1.

On the north and south lines of the railroads in the vicinity of Bruceton the heavy traffic direction was northward; on the east and west lines it was eastward.

The traffic manager of the Burfen Chemical Company consulted the tariffs of the Powhatan Valley Railroad and found that the rate on silicate from Verona to Remington was 13 cents per 100 pounds, although to Magnolia, 13 miles south of Verona, the rate was 8 cents per 100 pounds. The 13-cent rate applied to all stations between Magnolia and Thomas, which was 89 miles south of Verona. Remington was intermediate between Magnolia and Thomas.

The traffic manager of the Burfen Chemical Company requested the Powhatan Valley Railroad to grant a commodity rate on silicate of 9 cents per 100 pounds from Verona to Remington, stating in the request that a rate of 8 cents per 100 pounds applied to Magnolia, and that Remington was but a short distance south of Magnolia. He further stated that the 13-cent rate, which applied to points 89 miles from Verona, was too high for the distance between Verona and Remington, and that unless a lower rate were granted, the company would not be able to obtain its potential business in Remington.

The general freight agent of the Powhatan Valley Railroad to whom the Burfen Chemical Company's request was referred for action, drew up a table (Exhibit 2) showing the railroad's rates on silicate to points in the Bruceton district.

There was no commodity rate on silicate in effect on the Powhatan Valley Railroad from Verona to Remington, although commodity rates on silicate were in effect between practically all other stations noted in Exhibit 2; the railroad had to meet competition between most of these points. On the other hand, the only rates which were lower than 9½ cents applied to distances of 11 and 13 miles. The 9½-cent rate from Verona to Cool Spring was a competitive rate. Cool Spring was directly across the river from Bruceton. The air-line distance between Verona and Cool Spring was 13 miles, but, because the Powhatan Valley Railroad line between the two points extended 15 miles north of Bruceton on one side of the river to the only bridge in the vicinity and the same distance back on the other side, the rail distance

EXHIBIT 2

POWHATAN VALLEY RAILROAD'S FREIGHT RATES ON SILICATE, 1924

From	To	Miles	Proposed Rate	Existing Rate (5th class)
Denham	Remington	29	9 Cents	13 Cents
Verona	Remington	32	9 Cents	13 Cents

From	To	Miles	Existing Commodity Rate	Existing Rate (5th class)
Denham	Magnolia	11	8 Cents	11½ Cents
Verona	Magnolia	13	8 Cents	11½ Cents
Bruceton	Magnolia	25	11½ Cents	15½ Cents
Bruceton	Remington	44	none	15½ Cents
Verona	Berwyn	40	11½ Cents	15½ Cents
Verona	Bristol	32	11½ Cents	15½ Cents
Verona	Gilmer Falls	38	11½ Cents	15½ Cents
Verona	Shelton	47	11½ Cents	15½ Cents
Verona	Harmony	45	11½ Cents	15½ Cents
Verona	Thomas	89	13 Cents	19 Cents
Bruceton	Thomas	100	15½ Cents	19 Cents
Verona	Bruceton	11	7 Cents	13 Cents
Verona	Cool Spring	41	9½ Cents	15½ Cents

over that line was 41 miles. The Woodford Railroad floated cars across the Powhatan River from Bruceton to Cool Spring. By that line, the distance from Verona to Cool Spring was only 15 miles.

Upon investigation, the general freight agent of the Powhatan Valley Railroad found that no silicate was shipped from Bruceton to Magnolia under the 11½-cent rate. He decided, therefore, to cancel that rate. He then offered the Burfen Chemical Company a rate on silicate of 11½ cents from Verona to Remington. The Burfen Chemical Company, however, refused to accept the 11½-cent rate. The company stated that it was of the opinion that, in view of the 8-cent rate from Verona to Magnolia, a rate of 9 cents to Remington would be fair. The company also called attention to the 9½-cent rate in effect between Verona and Cool Spring.

Although the traffic manager of the Burfen Chemical Company had stated that Remington was but a short distance below Magnolia, the distance from Remington to Magnolia actually was greater than that from Magnolia to Verona. His argument

for a rate slightly above that to Magnolia, therefore, was weak. Since the company had markets for silicate in Bruceton and other cities to the north, it would not be prevented from doing all business in that commodity if it could not gain an entrance into the Remington market. There was no possibility that another railroad would get the potential traffic of the Burfen Chemical Company if that company refused to take the rate offered by the Powhatan Valley Railroad, since that railroad was the only one to enter Remington. On the other hand, no silicate would move from Verona to Remington if a sufficiently low rate were not granted. The matter was resolved into a question of whether or not a rate satisfactory to the Burfen Chemical Company would pay the cost to the railroad of moving the freight.

The general freight agent of the railroad believed that if a rate of $9\frac{1}{2}$ cents was satisfactory from the railroad's point of view for a 41-mile haul in the heavy traffic direction, the rate could be quoted safely for a 32-mile haul in the light traffic direction. He decided, therefore, to offer the Burfen Chemical Company a rate of $9\frac{1}{2}$ cents. This rate the company accepted. Although the railroad believed that the $9\frac{1}{2}$ -cent rate would afford but a slight margin above the out-of-pocket costs of moving the traffic, the movement was in the light traffic direction and the cars in which the silicate would be shipped would otherwise be hauled empty between Verona and Remington.

COMMENTARY: This is a good illustration of the effect of competition in blanketing the rates to non-competitive stations between two stations which were competitive. The rate from Verona to Remington (32 miles) was the same as from Verona to Thomas (89 miles). The railroad had met competition at Magnolia and Thomas, but inasmuch as there was no competition at local stations between Magnolia and Thomas the local rate from points north to those intermediate stations was made the same as the rate to Thomas. Presumably the rate to Thomas had been depressed by competition and the local rates between Remington and Thomas had been made to conform to the lower rate to Thomas.

The case illustrates how little play the factor of mileage has in the fixing of competitive rates in a situation such as this, where a competitive rate of $9\frac{1}{2}$ cents from Verona to Cool Spring, 41 miles, mostly through a metropolitan area, was less than the rate of 13 cents from Verona to Remington, a straightaway movement of 32 miles.

In finally meeting the chemical company's request by granting a rate of $9\frac{1}{2}$ cents, the railroad was probably influenced only by the possibility of getting some additional traffic which otherwise would not move. The general freight agent attempted first to satisfy the chemical company with a rate of $11\frac{1}{2}$ cents, but that rate was not accepted. Before making the second offer of $9\frac{1}{2}$ cents, which was accepted, the general freight agent probably satisfied himself that nothing higher than $9\frac{1}{2}$ cents would move the traffic. It is not unlikely that this was the sole reason for making the concession and that the factor of movement in the light direction really had no important bearing unless as an afterthought basis for justifying the change. The $9\frac{1}{2}$ -cent rate from Verona to Cool Spring, 41 miles, was in the direction of the heavy traffic movement.

February, 1926

W. J. C.

BRADLEY & BRISTOL RAILROAD¹

RAILROAD—FLOUR

RAILROAD RATES—*Request for Reduction Granted—Equalization of Rates between Equidistant Points.* A flour milling company requested the same rate on flour from its mill to a large city as was in effect from a station equidistant from the city on another branch of the same railroad. The railroad was convinced that the lower rate should be increased, but, as conditions in the area to which that rate applied made an increase impracticable, the railroad decided to grant the request.

RAILROAD RATES—*Request for Reduction Granted—Equalization of Rates to Competing Shippers.* After its request for a reduced rate from one of its mills to a certain station had been granted, a flour milling company asked the railroad to extend the lower rate to another mill several miles distant on the grounds that the two places, until the recent reduction, had paid the same rate. The railroad, although it believed that the rate was too low, granted the request because mills had located at the farther point in the belief that the rate equalization of the two points would be continued.

RAILROAD RATES—*Factor in Shippers' Prices.* The general freight agent of a railroad was of the opinion that the commodity rate on flour in effect between certain stations was too low. He decided not to increase the rate, however, because the division freight agent reported that the rate was being used extensively and that flour mills in the district had made sales in advance on the basis of the existing rate.

(1924)

¹ Fictitious name used for purpose of disguise.

The Crofton Mills² operated flour mills at Crofton and at Valley Hill, points 171 miles and 177 miles, respectively, west of Montrose, an Atlantic coast city with a population of more than 800,000. Crofton was on the main east and west line of the Bradley & Bristol Railroad; Valley Hill was 4 miles north of Crofton on a branch line of that railroad. The principal market for the Crofton Mills was in Montrose and the surrounding area.

Elmore, Tyson, and Long View were agricultural and flour milling communities located from 35 miles to 45 miles northeast of Crofton on another division of the Bradley & Bristol Railroad. Long View was 171 miles from Montrose; Elmore and Tyson were about 160 miles.

The Bradley & Bristol Railroad's freight rate on flour from Crofton and Valley Hill to stations in the Montrose district was 20½ cents per 100 pounds. That rate was a commodity rate and applied to all grain products in carload lots. From Elmore, Tyson, and Long View the railroad's freight rate on flour was a special rate, effective since September 1, 1923, of 16 cents per 100 pounds. The rate on other grain products was 20½ cents per 100 pounds.

In January, 1924, the Crofton Mills requested the Bradley & Bristol Railroad to quote a rate of 16 cents per 100 pounds on flour from Crofton to stations in the Montrose district, stating that the mileage from Crofton to Montrose was exactly the same as that from Long View to Montrose and that the difference in rates gave the mills in Long View a competitive advantage in marketing flour in the Montrose district. Crofton was on a through line direct to Montrose, while Long View was not.

The general freight agent of the Bradley & Bristol Railroad was of the opinion that the 16-cent rate was too low for the haul in question. He concluded that the 16-cent rate from Elmore, Tyson, and Long View to the Montrose district should be canceled. If that were done, the Crofton Mills could not protest the existing rate from Crofton on the grounds that it placed them at a disadvantage with their competitors. The general freight agent then consulted the division freight agent of the division on which Elmore, Tyson, and Long View were located. The divi-

² Fictitious name used for purpose of disguise.

sion freight agent reported that the rate in question was being used extensively, that sales based on that rate were booked in advance by the mills at those stations, and that, consequently, any increase in the rate at that time would work a hardship upon the mills.

The situation as reported by the division freight agent convinced the general freight agent that it was impracticable to cancel the special rate. Since Crofton and Long View were in the same agricultural district and equidistant from Montrose, he decided that they should be quoted the same rate. He proposed to make effective, beginning June 1, 1924, a rate of 16 cents per 100 pounds of flour.

This proposal the general freight agent sent to the Trunk Line Association, an organization to which all the large railroads in the district belonged. Any proposal for a rate reduction made by a member of this association was sent to the association. The association then sent copies of the proposal to all member railroads. If all the members assented to the proposal, the association notified the railroad that it was free to put the reduced rate into operation. If any member objected to the proposal, it was docketed for discussion at the next monthly meeting of the association. If the association failed to approve the reduction, the railroad could not put it into effect.

In this case, the Morris & Clinton Railroad,³ whose lines covered most of the territory between Montrose and Crofton, although they did not extend to any of the points under discussion, objected to the establishment of the 16-cent rate from Crofton to the Montrose district. The Morris & Clinton Railroad had in effect a rate of 19½ cents per 100 pounds on flour to Montrose from several points northeast of Crofton which were a few miles nearer to Montrose than Crofton was. This railroad expected that shippers in those points would demand a rate reduction if the 16-cent rate was put into effect from Crofton. The matter was discussed at the monthly meeting of the Trunk Line Association, and the Morris & Clinton Railroad finally assented to the 16-cent rate proposed by the Bradley & Bristol Railroad.

As soon as it was notified that the 16-cent rate on flour from

³ Fictitious name used for purpose of disguise.

Crofton to Montrose and stations in the Montrose district was to become effective on June 1, the Crofton Mills requested that the rate be extended to Valley Hill, pointing out that its mill at Valley Hill was but six miles from the mill at Crofton and that the rates from the two places always had been the same.

The general freight agent of the Bradley & Bristol Railroad asked the division freight agent whether he thought it advisable to grant the second request of the Crofton Mills. The division freight agent replied that, since the rates on flour to Montrose had been the same from Valley Hill and Crofton until the late reduction, he would recommend the extension of the 16-cent rate to Valley Hill.

The general freight agent still believed that the 16-cent rate was too low for the haul in question. He disapproved, moreover, of the method the Crofton Mills had taken to obtain the desired reductions. The company, knowing that if it asked for both reductions at the same time its requests probably would be refused, first had obtained the 16-cent rate from Crofton, on the grounds that another station equidistant from Montrose already had that rate, and then had requested that the rate from Crofton be extended to Valley Hill, a point six miles further from Montrose, on the grounds that Crofton and Valley Hill previously had paid the same rate.

Although the general freight agent was reluctant to extend the 16-cent rate, he believed that the railroad should keep the rates from Crofton and Valley Hill equal, because mills had located at Valley Hill instead of at Crofton, relying on the continued rate equalization of the two points. He therefore arranged for the 16-cent rate to become effective from Valley Hill to stations in the Montrose district September 4, 1924.⁴

⁴ For commentary, see page 231.

MOUNT PLEASANT RAILROAD ¹

RAILROAD—STEEL BARS

RAILROAD RATES—*Request for Reduction Refused—Discouraging Traffic in Congested Area.* A railroad was requested by a large shipper to

¹ Fictitious name used for purpose of disguise.

reduce the rate applying to steel bars shipped between two stations in an eastern city. The railroad, wishing to discourage intracity traffic because of congestion in its terminal district, decided not to reduce the rate.

(1924)

The Andee Company,² a manufacturer of steel, had a distributing plant at Jackson, an outlying section of a large eastern city. In April, 1924, the company requested the Mount Pleasant Railroad, which served the Jackson plant, to reduce the rate on steel bars in carloads between Jackson and Elm Street Wharf from 6 cents per 100 pounds to 5 cents. In its request the company stated that a rate of 5 cents applied from Jackson to the Central Avenue Station, a distance of 10.1 miles, and that Elm Street Wharf, which was intermediate between Jackson and Central Avenue, was only 8.8 miles from Jackson.

The distances as given by the Andee Company were by a belt line which ran along the river front of the city. The volume of freight traffic which moved over the belt line was heavy, and, when it was possible, the Mount Pleasant Railroad routed traffic around the central part of the city over lines which were less congested. Low-grade traffic, such as steel bars, moving between Jackson and Elm Street Wharf was diverted from the belt line and sent by the more roundabout route. The distances by the latter route from Jackson to Central Avenue and from Jackson to Elm Street Wharf were 13 and 14.3 miles respectively. By that route, Central Avenue was intermediate between Jackson and Elm Street Wharf. Nevertheless, for rate-making purposes, the belt line distance applied.

Upon receiving the request for the rate reduction, the freight traffic department of the Mount Pleasant Railroad, in accordance with the usual practice, wrote to the division freight agent on whose division the stations were located and asked for his recommendations. He replied that he thought that the 6-cent rate was low enough for the traffic, especially in view of the charges for stevedoring and other expenses which the Mount Pleasant Railroad would have to assume, inasmuch as the steel bars would be transferred to a steamer at Elm Street Wharf; stevedoring charges were included in the railroad's rate. He further stated that the 5-cent rate from Jackson to Central

² Fictitious name used for purpose of disguise.

Avenue, to which the Andee Company had referred in its request, was not being used, and he recommended that the rate be canceled.

Because of the heavy volume of traffic which moved to and from the city stations, and the consequent congestion in the terminal district, the Mount Pleasant Railroad wished to discourage intracity movement of freight, preferring to allow motor trucking companies to handle that traffic.

Following the suggestion of its division freight agent, the railroad submitted a proposal to the Trunk Line Association to cancel the 5-cent rate between Jackson and Central Avenue. All the important railroads in the area belonged to the Trunk Line Association, and no change in rates could be made without the consent of the association. In this instance, the association agreed to the proposal of the Mount Pleasant Railroad. With the 5-cent rate between Jackson and Central Avenue canceled, the Andee Company could not cite that rate as an argument to have the rate between Jackson and Elm Street Wharf reduced.

The railroad believed that in view of the actual length of the haul the 6-cent rate was sufficiently low for the service rendered, and, therefore, refused to grant the request of the Andee Company for a rate of 5 cents.

BRADLEY & BRISTOL RAILROAD¹

MOUNT PLEASANT RAILROAD²

COMMENTARY: These two cases are good examples of the type of rate adjustments constantly under consideration by the freight traffic departments of railroads. They are typical examples also of the activities of industrial traffic managers in endeavoring to obtain advantageous rate concessions for their individual companies.

The Bradley & Bristol Railroad case illustrates the influence of competition on the rates from several producing points to a common market. Such competition ordinarily has the effect, within limits, of subordinating distance and cost as important factors in rate-making. The case also illustrates the divergent points of view of the industrial traffic manager, who wishes to extend the zone of a competitive rate blanket, and of the railroad traffic manager, who is on guard against such extension and its possible effect upon other rates. In this case is seen

¹ See page 226.

² See page 229.

also a form of strategy often used by the industrial traffic manager in "nibbling" at the rate scale by obtaining one concession and then using it as the justification for a request for a further concession.

The Mount Pleasant Railroad case has a similar setting, but here the factor of terminal operation through a congested terminal area led the railroad company to decline the request. Unfortunately for the shipper, the lower rate from Jackson to Central Avenue Station, cited as the basis for the request, was not being used, and the railroad was able without protest to cancel it. The apparent discrimination against the shippers from Jackson to Elm Street Wharf was thus removed and the basis for the petition was removed. In the Bradley & Bristol Railroad case, the comparative rate used to support the plea for a lower rate from Crofton to Montrose was being used freely and, therefore, could not be canceled without opposition.

The Mount Pleasant Railroad case illustrates the tendency of railroad traffic managers to surrender the short-haul traffic in congested metropolitan areas to the motor truck so as to reserve the facilities for terminal service for the more attractive long-haul traffic.

Both cases serve to show how little practical bearing the general rate-making section (15a) of the Transportation Act has upon the adjustment of individual competitive rates. In these two cases practically no consideration was given to the relation of cost of service and fair return on investment value. These principles have bearing upon the establishment of the general scale of rates as a whole, but individual cases such as these usually are determined by the weight of other factors.

June, 1926

W. J. C.

NATIONAL EXPORT ADVERTISING SERVICE

EXPORT ADVERTISING AGENCY

EXPORTING—*Operation of Export Advertising Agency.* An export advertising agency had the accounts of a number of manufacturers interested in advertising their products abroad and assisted them by surveying markets, recommending mediums, securing space, developing copy, and preparing art work. In order to insure competent service and the lowest practicable advertising rates, the company maintained connections with individuals and publications abroad in addition to its own organization in New York.

ADVERTISING—*Compensation of Export Advertising Agency Placed on Service Charge Basis.* An export advertising agency had been securing its compensation in some cases by retaining commissions allowed by foreign publications, and in others by making a service charge to its clients. The company decided to attempt to standardize its practice by fixing

all compensation on the service-charge basis, because it felt that this method was more clear-cut and more in accord with the actual functions which the company was performing.

(1925)

In 1925 there were in New York City at least six advertising agencies that confined their activities to assisting American companies to advertise their products in foreign countries. The National Export Advertising Service, one of these, in common with the others, had two alternative methods of securing compensation for its services, the method used in any instance being optional with the client. By one of these methods, the one originally used exclusively, the agency simply retained the commissions allowed it by the mediums in which it placed the advertisements of its client, making no charge at all to the advertiser. By the other method, the agency passed on the commission to the client and collected from the client a service charge amounting to 20% of the net cost of the advertising placed after deduction of discounts and commissions. A number of the executives of the National Export Advertising Service were of the opinion that the agency should standardize its practice of securing compensation by employing the service charge method exclusively.

Some of the competitors of the National Export Advertising Service asked 20% as a service charge; others, when following this method of compensation, asked only 15%, and some accepted an even smaller percentage in order to secure desirable accounts.

Although some clients required far more complete service than others, the rates charged by the agencies did not vary with this factor. Some of the clients of the National Export Advertising Service supplied the agency with copy and specifications. The agency, in such cases, merely contracted for space in foreign publications, arranged schedules of insertions, effected payments, and submitted vouchers, in accordance with the specifications and copy furnished by the advertisers. Other advertisers required the agency to recommend mediums and to arrange for the preparation of copy and art work. Because of the impracticability of devising a scale of charges to fit the requirements made upon it by its various clients, or by the same clients at various times, the National Export Advertising Service, as well

as the comparable agencies in New York City, proceeded on the theory that all clients were entitled to complete service and that whether they availed themselves of such service was optional with them. Mechanical preparation of material such as blocks, electros, and so forth, was not performed by the agency. When such material was required, the agency had the work done outside its own office and charged its clients cost plus 15%.

The National Export Advertising Service ordinarily did not undertake any advertising except in newspapers and magazines. The company had representatives in all parts of the world, who, among other things, assisted the agency by translating advertising copy into the languages of the countries in which they lived. The company made a practice of having translations and art work prepared by persons familiar with the countries in which the advertisements were to appear.

The company maintained contacts with advertising mediums in all foreign countries in which American manufacturers advertised. Sometimes the agency made arrangements with foreign papers or magazines direct, as with those in Havana and in the smaller towns of Peru. In other cases, the agency worked through local advertising agencies, as in Australia and the Philippines. Some foreign newspapers, notably those in the larger cities of South America, were represented in New York City. The agency made arrangements with such papers through their representatives. The agency endeavored to make those arrangements, in any given territory, which would result in the advertisers' obtaining the lowest rates compatible with satisfactory service.

When it placed advertising through local advertising agencies, the company customarily shared with those agencies the commissions allowed on the advertising so placed. In some instances, the local agencies retained one-third of the amount of the commission and in others one-half. In all such cases, however, the company allowed clients who chose to pay the service charge the full amount of the commissions and deducted the full amount from the costs of the advertising in arriving at net figures upon which to base the service charge. The company regarded any such payments to its representatives as part of its overhead.

Ordinarily, the company did not make payments in advance against its space commitments. It paid all bills promptly, how-

ever, maintaining bank accounts in London, Paris, Calcutta, Kobe, Buenos Aires, Rio de Janeiro, Bogota, and Melbourne, and deposit accounts with its representatives in Manila, Singapore, Porto Rico, Lahore, La Paz, and Lima, in order to facilitate payments in local currencies.

By 1925 most newspapers and magazines of importance were publishing advertising rate cards. In the more advanced cities, like London, Paris, and Havana, reputable publications held to their published rates inflexibly. Certain discounts were allowed for cash, for large purchases of space, and for long-term insertions, but these discounts were indicated on the rate cards. The rates given on the rate cards of most foreign publications, however, could not be regarded as final. The rates actually paid for insertions in those publications usually were the result of bargaining.

All publications allowed commissions to agencies that placed advertisements with them. Usually these commissions were paid only on advertisements placed by agencies, and not on those placed directly by the advertiser. The commissions were percentages of the net cost of the advertising and varied in size. In general, London newspapers allowed 10%, Continental newspapers 15%, and Latin-American newspapers 20%. There were numerous exceptions to these general percentages, however; some newspapers allowed no more than 5%, and others paid commissions as high as 40% or 50%. Generally, the newspapers allowing the highest commissions were the least desirable as advertising mediums.

A comparison of the amounts received in payment by the agency per inch of advertising placed and the per inch costs to the advertisers under the commission method of compensation and under the service charge method is shown in Exhibit 1. The comparison is based on the assumption of an advertising rate, after deduction of discounts, of \$1.20 per inch, commissions of 10%, 15%, 20%, and 25%, and a service charge of 20%.

Since in practice no advertising medium paid a commission intermediate between 15% and 20%, whenever the commission allowed the agency was 15% or less, the agency, as shown by Exhibit 1, made more by passing the commission on to its client and making a 20% service charge than by retaining the com-

EXHIBIT I

COMPARISON OF AMOUNTS RECEIVED BY ADVERTISING AGENCY AND
COSTS TO ADVERTISER UNDER TWO METHODS
OF RECOMPENSING AGENCY

Advertising Rate per Inch*	Commission Allowed Agency by Advertising Medium	Agency's Compensation by Commission Method†	Agency's Compensation by 20% Service Charge Method‡	Cost to Advertiser by Service Charge Method
\$1.20	10%	\$0.12	\$0.22	\$1.30
1.20	15	0.18	0.20	1.22
1.20	20	0.24	0.19	1.15
1.20	25	0.30	0.18	1.08

*This rate, chosen arbitrarily, assumes deduction of any discounts allowed, and so represents cost to advertiser under commission method of compensating agency.

†Agency retains commission as payment of services to advertiser.

‡Agency passes on commission to advertiser and charges advertiser 20% on net cost of insertions after deduction of discounts and commission.

mission. Whenever the commission allowed was more than 15%, on the contrary, the agency made more by retaining the commission than by passing it on and collecting the 20% service charge. Correspondingly, whenever the commission was 15% or less, it was to the advertiser's advantage that the agency retain the commission; and whenever the commission was more than 15%, the advertiser gained by paying the service charge and obtaining the commission. When the commission was just 15%, the differences between the amounts received by the agency and between the costs to the advertiser under the two methods of compensation were less than at any other rate of commission, being comparatively small. The National Export Advertising Service was of the opinion that the actual commissions allowed by the publications which it used averaged about 15%.

The company was convinced that many manufacturers who had not studied the question carefully preferred the commission method of compensation for the reason that under that method they did not appear to be paying anything at all for the services of the advertising agency.

Under the commission method of compensation, unscrupulous agencies might be tempted to recommend the use of the publications paying the highest commissions, regardless of the merits of the publications. Under either method it was possible for agencies to retain discounts obtained in addition to those cus-

tomarily allowed by the mediums. Many advertisers were comparatively ignorant of the methods used by foreign publications and it was impracticable for the agencies to supply clients with voucher copies of the bills received from the publications; such bills often were submitted quarterly only and included specifications from more than one advertiser. The National Export Advertising Service was confident that such dishonest practices were rare and believed, moreover, that the attendant possibility or non-possibility of fraud should not have much weight in a consideration of methods.

A decade or two prior to 1925, about the only American companies which had been advertising their products abroad to any extent had been the manufacturers of patent medicines. Those manufacturers had used small insertions, supplying the blocks and electros themselves, and the only service they had required of advertising agencies had been the placing of the advertisements with suitable publications. The agencies had sought out the desirable mediums and had bargained with them to obtain as low rates as possible. It was natural, under those circumstances, that advertising agencies should have considered the commissions allowed them by the publications with which they placed advertising appropriate compensation for their services.

As more and more manufacturers began to advertise in foreign publications, the situation had changed. By 1925 the names of the best advertising mediums in all countries were well known and their rates were fairly standardized. Foreign newspapers were tending steadily to improve their business methods. It was becoming easier to obtain voucher copies, for example, and to secure systematic attention to requirements. The work of the advertising agencies in placing advertising was beginning to be overshadowed by new services demanded of them by the advertisers. The agencies made market surveys for their clients, advised them as to copy and art work, or made arrangements for the preparation of such work. The export advertising agency was no longer merely a point of contact between the advertiser and the foreign publication; the agency was increasingly the merchandising counselor of its clients.

In the light of this development, the National Export Advertising Service was convinced that any method of compensation which depended on commissions from publications used, placed

the agency in a false position. The agency was not acting in behalf of the newspapers or magazines with which it placed advertisements. Its real clients were the advertisers, and its compensation, so the agency believed, should come directly from those clients.

The National Export Advertising Service, because it realized that there still were many manufacturers who preferred the commission method of compensation, did not insist upon changing all its accounts to the service-charge basis. The company decided, in accepting new accounts, to attempt to place the advertisers on a service-charge basis and to try gradually to change all existing accounts to that basis.

COMMENTARY: The company in this case handled export advertising for American manufacturers. It furnished these manufacturers with whatever assistance they required in connection with advertising their products in foreign countries. Often, apparently, it was virtually the export advertising department of the manufacturer in question. On the other hand, the company represented no foreign newspapers or publications of any kind. Advertising was placed with the needs of the manufacturer in mind, and not because particular publications were to be favored. The title of the company included the word "service" and obviously this service was intended for the manufacturers.

Under these circumstances, the case raises the definite question whether a company of such a type should be compensated directly by the person for whom its services are performed, or indirectly through concessions granted by those benefited incidentally.

The company decided to adopt a general policy of fixing its compensation on the basis of a service charge to its clients. This seems entirely sound in theory, and the reasoning of the company in the last paragraph of the case is correct on that basis. Undoubtedly, more and more is being demanded of export advertising agencies in the way of merchandising services and it is far more convincing to make a direct charge for such services than to evade making a charge by retaining certain commissions.

Practically, also, the service charge has much to commend it. The granting of commissions to agencies by foreign newspapers and publications is based on the idea of holding out special inducements in order to secure business, and, together with the practice of offering special discounts, has been a fruitful source of abuse. Moreover, there is a speculative element in payment by commission which is inconsistent with the development of service. The commissions allowed by foreign

publications vary, but the services performed by the advertising agency do not vary with them. If, in a particular instance, the commission allowed is commensurate with the services rendered, such a result is purely fortuitous. An agency which depends for its compensation on commissions, therefore, automatically limits its possibilities for service. Such an agency is in the equivocal position of attempting to provide service on a basis of compensation which bears no relation whatever to the service given.

Therefore, the company's decision in this case appears sound.

December, 1925

P. W. T.

HICKS, ALIEN PROPERTY CUSTODIAN, ET AL. VERSUS GUINNESS, ET AL.¹

GUINNESS, ET AL. VERSUS HICKS, ALIEN PROPERTY CUSTODIAN, ET AL.

FOREIGN EXCHANGE—*Fixing of Exchange Rate in Converting Liquidated Damages Figured in Foreign Currency.* On an agreed account dated December 31, 1916, a New York company was owed 1,079.35 marks by a German company. This debt was to be paid in the United States and was not settled before or during the war between the United States and Germany. In endeavoring to collect the amount from the alien property custodian, who had taken over assets of the German company in the United States, the New York company maintained that for the purpose of computing damages, the 1,079.35 marks should be converted into dollars at the rate of exchange prevailing at the time the breach of contract arose. The Supreme Court of the United States upheld this contention on the ground that the New York company was entitled to be indemnified for the loss of what it would have had if the contract had been performed.²

INTEREST—*Obligation of Company Domiciled in Enemy Country during War Period.* On an agreed account dated December 31, 1916, a New York company was owed 1,079.35 marks by a German company. This debt was to be paid in the United States and was not settled before or during the war between the United States and Germany. In endeavoring to collect the amount from the alien property custodian, who had taken over assets of the German company in the United States, the New York company maintained that interest should be allowed for the time covered by the war, from April 6, 1917, to July 14, 1919. The Supreme Court of the United States upheld this contention.²

(1925)

¹ Supreme Court of the United States. Argued October 22 and 23, 1925. Decided November 16, 1925. 46 Sup. Ct. 46.

² Headnote by Harvard Graduate School of Business Administration.

Mr. Justice HOLMES delivered the opinion of the Court:

These are cross petitions based upon a suit brought against the Alien Property Custodian by Guinness and others, doing business under the firm name of Ladenburg, Thalmann & Company in New York. The facts are not in dispute. A German firm, Joerger and others doing business under the name of Delbruck, Schickler & Company, was indebted to the American firm under an account stated on December 31, 1916, for 1,079.35 marks, subject to a set-off of \$35.35. The debt was not paid when the war between Germany and the United States began, April 6, 1917. The Alien Property Custodian had taken property of the German firm of a value greater than the debt and the American firm brought this suit in equity to recover what was due to it, as provided by the Trading with the Enemy Act of October 6, 1917, c. 106, § 9, 40 Stat. 411, 419, amended by the Act of June 5, 1920, c. 241, 41 Stat. 977 (Comp. St. Ann. Supp. 1923, § 3115½e). The only questions raised and argued here are whether interest is to be allowed for the time covered by the war, from April 6, 1917, to July 14, 1919, and at what date the value of the mark is to be estimated in dollars in order to fix the amount of the decree. The district court held that interest was suspended during the war, 291 F. 768, and that the value of the mark at the time when the debt should have been paid was the proper measure. (This value is fixed as 17½ cents.) 291 F. 769. The decree was affirmed by the Circuit Court of Appeals. 299 F. 538. The Alien Property Custodian in the interest of the German debtors seeks to reverse the latter ruling, in No. 80, and the American firm seeks to reverse the former ruling, in No. 81.

(1) We take up the second question first as the principles that govern it have some bearing upon the matter of interest also. We are of opinion that the courts below were right in holding that the plaintiffs were entitled to recover the value in dollars that the mark had when the account was stated. The debt was due to an American creditor and was to be paid in the United States. When the contract was broken by a failure to pay, the American firm had a claim here, not for the debt, but, at its option, for damages in dollars. It no longer could be compelled to accept marks. It had a right to say to the debtors—you are too late to perform what you have promised and we want the dollars to which we have a right by the law here in force.³ The event has come to pass upon which your liability becomes absolute as fixed by law.⁴ There is no doubt that this rule prevails in actions for a tort, *Preston v. Prather*, 137 U. S. 604, 11 S. Ct. 162, 34 L. Ed. 788, and in actions for the failure to deliver merchandise.⁵ The principle is the same in a contract for the payment of marks. The loss for

³ *Gould v. Banks*, 8 Wend. (N. Y.) 562, 567, 24 Am. Dec. 90.

⁴ *Globe Refining Co. v. Landa Cotton Oil Co.*, 190 U. S. 540, 543, 23 S. Ct. 754, 47 L. Ed. 1171.

⁵ *Hopkins v. Lee*, 6 Wheat. 109, 5 L. Ed. 218.

which the plaintiff is entitled to be indemnified is "the loss of what the contractor would have had if the contract had been performed," *Chicago, Milwaukee & St. Paul Ry. Co. v. McCaull-Dinsmore Co.*, 253 U. S. 97, 100, 40 S. Ct. 504, 64 L. Ed. 801, it happens at the moment when the contract is broken, just as it does when a tort is committed, and the plaintiff's claim is for the amount of that loss valued in money at that time. The inconveniences and speculations that would be the result of a different rule have been pointed out in arguments and decisions, and on the other hand the momentary interest of the country of the forum may be in favor of taking the date of the judgment, but the conclusion to which we come seems to us to flow from fundamental theory and not to need other support. It is in accord with the decisions of several state courts and circuit courts of appeal as well as of the English House of Lords.⁶

(2) The denial of interest for the time covered by the war seems to us wrong. The cause of action had accrued before the war began, *Young v. Godbe*, 15 Wall. 562, 21 L. Ed. 250, and after it had accrued the question was no longer one of excuse for not performing a contract, but of the continuance of a liability for damages that had become fixed.

No. 80, decree affirmed.

No. 81, decree reversed as to interest.

Mr. Justice Stone took no part in this case.

COMMENTARY: The distinction in this case is between a continued failure to fulfil an obligation and the arising of a new liability in consequence of such failure. The German company owed the American company a definite number of marks and at any time during the term of the obligation could have tendered that number in full settlement. Failure to pay on the stated date, however, or in accordance with the contract terms, created a new situation. Instead of being obligated to accept a fixed amount, the American creditor acquired the right to be put in the same position which it would have enjoyed if the original obligation had been met.

This legal proposition is firmly established, and its extension to contracts couched in foreign currencies seems natural and inevitable. Two inferences necessarily result from the reasoning of the court on this point. Granted that the American company had become entitled to what it would have enjoyed if the debt had been settled within the contract terms, it was entitled not to 1,079.35 marks but to the equivalent number of dollars at the time the contract to pay was broken. In

⁶ *Hoppe v. Russo-Asiatic Bank*, 235 N. Y. 37, 138 N. E. 497; *Katcher v. American Express Co.*, 94 N. J. Law, 165, 171, 109 A. 741; *Simonoff v. Granite City National Bank*, 279 Ill. 248, 255, 116 N. E. 636; *Wichita Mill & Elevator Co. v. Naamlooze, etc., Industrie (C. C. A.)* 3 F. (2d) 931; *S. S. Celia v. S. S. Volturmo*, [1921] 2 A. C. 544.

computing such damages, that is, the exchange would have to be figured at the rate current at the time of the original default.

The reasoning in regard to the interest is somewhat more involved but similar in thought. It is impossible to state definitely the precise amount which the American company would have made in profits from the proper payment of the original obligation. Interest on such a liability is at best a rough and ready approximation of the profit to be made from the use of a given sum, but since it is the only approximation allowed by law, and since it dates from the accrual of the right of action, the court was obviously right in allowing interest for the time covered by the war.

The case illustrates the desirability of providing for exchange in contracts which involve financial dealings with foreign companies. If the original agreement of the two companies, for instance, had specified the rate at which transactions were to be effected, or had set a date whose current rate was to be adopted, the question never would have been subject to dispute.

April, 1926

P. W. T.

AMEROID TIRE AND SHOE COMPANY¹

MANUFACTURER AND EXPORTER—TIRES AND SHOES

INTEREST—*Charged on Drafts on Foreign Buyers.* In connection with a sale to a wholesaler in Chile, an official of a tire and shoe company recommended the adoption of a uniform policy in regard to the payment of interest charges on foreign drafts; the company, in accordance with business usage, charged the interest to purchasers in the Far East, had a varied practice in Europe, and on drafts sent to South America usually paid the interest itself. The company decided to charge the interest on foreign drafts to the purchasers in all cases except those in which competition or other questions of business expediency made that policy impracticable. Since it quoted prices f.o.b. New York, the company was of the opinion that buyers should pay for the use of the money involved in their orders subsequent to shipment.

FOREIGN DRAFTS—*Factors Influencing Terms of Payment.* The company quoted prices to foreign customers in United States dollars f.o.b. New York. It drew drafts on foreign purchasers at 60 days, documents against acceptance, or at 60 days, documents against payment, depending upon the credit reliability of the purchaser and business usage and competition in his country. In the Far East, banks permitted reliable customers purchasing under documents drawn against payment to take

¹ Fictitious name used for purpose of disguise.

possession of the goods under trust certificates before the drafts were paid.

(1924)

The Ameroid Tire and Shoe Company was one of the largest of its kind in the United States. Its foreign sales constituted about 10% of its total sales volume. The company quoted prices to foreign purchasers in United States dollars f.o.b. New York. In 1924 an inquiry from the company's bank concerning interest charges on a draft drawn by the company on a purchaser in Chile led the company to review its policies of charging interest on export drafts.

The order of the Chilean wholesaler, Henzado Hermanos,² totaled \$5,000. The Ameroid Tire and Shoe Company had inquired concerning his credit position through its usual sources, its bank and the credit file of the National Association of American Manufacturers. These inquiries had brought forth little information except that the purchaser was apparently reliable.

It was the general practice of the Ameroid Tire and Shoe Company to draw drafts at 60 days, documents against acceptance, upon foreign purchasers of whose credit reliability it was certain, and drafts at 60 days, documents against payment, upon foreign purchasers who were purchasing for the first time or concerning whom credit information was not available. The company's policy in this respect varied with countries, however. Under the first type of draft, the purchaser secured possession of the goods by accepting the draft. Under the second type, the purchaser secured possession only upon actual payment of the draft. In some countries, especially in the Far East, the banks permitted reliable customers purchasing under the latter arrangement to take out trust receipts with the banks; these trust receipts gave the customers possession of the goods before the drafts actually were paid.

The company had drawn a draft on Henzado Hermanos at 60 days, documents against payment. The amount of the draft included the invoice amount of the order, which was \$5,000, less the usual cash discount, plus a separate charge for ocean freight and insurance. The company usually borrowed on such drafts from its bank, which credited the manufacturer's account with the amount of the draft and sent the draft to the bank's branch

² Fictitious name used for purpose of disguise.

or agent at the point of delivery to be presented to the customer for acceptance and payment. Interest on such drafts from the time the manufacturer's account was credited by the bank to the time that the money was received at the bank could be borne either by the manufacturer or by the customer.

The Ameroid Tire and Shoe Company had sent the draft on Henzado Hermanos to its bank to be discounted. It happened that the draft was received in the bank by a clerk who was unfamiliar with the practices of the Ameroid Tire and Shoe Company in regard to interest charges. The clerk, therefore, telephoned the company and asked for instructions in regard to the interest. The official who answered this inquiry also was unaware of the usual practice. Upon investigation he found that the company always charged interest on drafts to customers in the Far East, that in Europe the company's practice varied, and that in South America the company usually paid the interest itself. The official found also that the company usually drew drafts at 60 days, documents against payment, on customers in the Far East; drafts at 60 days, documents against acceptance, on customers in South America; and that in Europe the company's practice varied.

After this investigation, the official suggested that the company adopt a uniform policy in regard to interest charges on export drafts, either paying the charges in all cases or charging them to customers in all cases. Purchasers throughout the Far East were used to paying the interest charges. In Europe there was no uniform trade usage in regard to such charges. The Ameroid Tire and Shoe Company charged interest to European customers whenever possible, but paid the interest itself whenever it was necessary to do so to avoid losing an order. In South America it was customary for manufacturers to assume the interest payments.

In favor of charging interest on export drafts to the customer, it was contended that such interest represented part of the overhead that purchasers were expected to bear; that a customer several thousand miles from his source of supply must expect to pay the expenses arising from the length of time it took his money to reach the seller; that in advancing money to the seller against the draft, the bank really was acting for the buyer, since quotations were in United States money and f.o.b. New York;

and that in the final analysis the payment of interest merely amounted to a cancelation of the usual discount allowed for cash payment in New York. For instance, since the Ameroid Tire and Shoe Company had sold its draft on Henzado Hermanos to the bank for immediate cash, the usual cash discount of 2% had been allowed on the invoice, reducing the invoice price from \$5,000 to \$4,900. The purchaser's money would not be received in New York until about three months after shipment. The bank at that time was charging 7% on such drafts, so that the total interest on the draft would amount to less than the sum of the cash discount.

The treasurer of the Ameroid Tire and Shoe Company, on the other hand, desired to add no more separate charges to the face amounts of the drafts than were necessary. He believed that such charges tended to confuse and antagonize the customers, and that most purchasers preferred to buy from manufacturers who maintained flat prices. German and French manufacturers with whom the company competed in South America were allowing favorable credit terms to purchasers in that territory. They often drew drafts at as much as 120 days, and several cases had come to the attention of the Ameroid Tire and Shoe Company in which German manufacturers had drawn drafts at 6 months. This competition made it necessary to offer favorable terms in order to secure permanent customers. The treasurer realized also that from the customer's point of view a draft was superfluous. The average customer would prefer an open account and would argue that if the manufacturer demanded the added protection of a draft he should pay for it.

The treasurer decided, however, to charge interest on the draft drawn on Henzado Hermanos to the purchaser, and to adopt a general policy of charging interest on drafts on foreign buyers to the buyers. He was of the opinion that, since interest was payment for the use of money, purchasers who did not keep in New York the money required to meet payments on shipments should pay for the use of that money from the time the goods were shipped to the time the money arrived in New York. The treasurer did not intend to follow this policy rigidly; he expected to make exceptions in cases in which the policy was questioned by desirable customers or in which competition made adherence to the policy inexpedient.

COMMENTARY: The problem in this case is the one usually met by manufacturers who receive advances from their banks against drafts drawn on foreign customers. It does not arise in cases where drafts simply are sent forward for collection, for no advances are made on such drafts, nor does it arise in the relatively few cases where banks purchase drafts outright, for in those rare instances interest may be included in the purchase price, and in any event, the bank is subrogated to all the rights of the drawer. The problem arises from the interposition of a third party between the buyer and the seller. *A* owes *B* money for goods bought and *C* advances money to *B* on the claim. Naturally, *C* is entitled to interest on the amount of the advance from the time that it is made to the time of his reimbursement by *A*'s final payment. The question is: Who is to pay this interest, *A* or *B*?

The obvious course is to follow the line of least resistance, to charge the interest to the customer in cases where it is felt that he will pay it without protest, and for the manufacturer to assume it otherwise. In following this procedure, a manufacturer may consider trade usage, competitive conditions, and other circumstances entering into the probability of the customer's willingness or unwillingness to pay.³ It is noteworthy that in most cases where manufacturers habitually assume such interest charges their decision is founded not so much on the basic merits of the question as on considerations of their own ability to pay, based on the inclusion of interest allowances in price quotations or the existence of large margins of profit.⁴

In this case, the Ameroid Tire and Shoe Company decided to adopt a general policy of charging the interest to its customers, although the decision is weakened by the intention to vary the practice wherever desirable to meet competitive or other special conditions.

The principles involved in foreign sales do not differ from those in domestic sales. The same elements must be present to constitute the sale, and the legal consequences differ no more than in varying jurisdictions in the United States. The chief difficulty is the physical one of distance. Instead of dealing with a man in a neighboring city or state, the manufacturer is selling to a customer who is perhaps thousands of miles from his factory. It is this factor of distance that has been largely responsible for the use of drafts. Credit difficulties increase with distance, and the use of drafts tends to lessen such risks.

The same element of distance makes it imperative either that the seller should part with his goods long before receiving his money or that the buyer should pay before receiving his shipment. It is impossible to reconcile the two as in a domestic transaction where the time element

³ See Hamlen Upholstery Company, page 251.

⁴ See Sherrill Razor Company, page 247.

is unimportant. The tying up of funds in a foreign sale is a physical fact due to distance, for which neither of the parties is solely responsible.

It would seem to follow that if, in such transactions, the seller wishes to receive payment at the time of shipment, the matter of interest on any advance is one properly to be provided for in his quotations. The increases necessary for the purpose in different countries can be averaged in order to arrive at a standard quotation, as it often would be impossible to adopt an individual price in each territory. The normal market is a buyer's market to the extent that the seller usually is the one to take the initiative. In doing so, he must accept the physical conditions inherent in foreign trade, and among the most noteworthy are those imposed by distance.

In the present case, therefore, the decision of the company to charge interest specifically to its customers seems to have been based on an insufficient consideration of the elements entering into a foreign sale and of the conditions controlling it. It would have been better policy to include such charges in the quoted prices.

November, 1925

P. W. T.

SHERRILL RAZOR COMPANY ¹

MANUFACTURER AND EXPORTER—RAZORS

INTEREST—*Charges on Foreign Drafts Paid by Exporter.* The company sold about 40% of its production in Europe and South America. Because of business usage and competition, the company always paid the interest charges on bank advances which it obtained on drafts which it drew on customers in those markets. In 1921 the company appointed a manufacturers' representative to act as its selling agent in the Far East. Although competition in the company's line was not keen in the Far East and importers in that territory were accustomed to paying the interest charges on drafts drawn on them, the company, because its prices for c.i.f. quotations any port in the world permitted it to assume such charges in all cases, decided to extend its usual practice to the Far East.

(1922)

The Sherrill Razor Company manufactured patented safety razors and blades. Its factory and main office were on the Atlantic seaboard of the United States. In 1921 the company had been exporting for nearly 20 years. It sold about 60% of its production in the United States and about 40% in Europe and

¹ Fictitious name used for purpose of disguise.

South America. The company quoted export prices in United States dollars c.i.f. any port in the world, a practice made practicable by the small bulk of the razors and blades in proportion to their value.

In London, Copenhagen, and Rio de Janeiro, the company maintained its own offices and kept stocks. In smaller markets, however, the company usually operated through exclusive wholesale agents, who maintained sufficient stocks to meet the requirements of their territories and attended to the details of distribution.

The company drew sight drafts on all foreign purchasers, except on the agents and distributors, who were on a special basis. The usual practice of the company was to secure advances from its bank on such drafts. In these cases, the company always paid the interest charges made by the bank on the advances. The interest charged on an advance covered the period from the date of the advance to the time of the receipt in New York of the funds represented by the draft. The company had adopted the practice of paying these interest charges because of business usage and competition. Few purchasers in South America were in the habit of paying interest charges; European export manufacturers invariably assumed such payments themselves. Competition in the company's lines was so keen that any manufacturer entering the European market was severely handicapped if he did not follow this usage.

In 1921 the company, which until that time had not sold in the Far East, appointed a manufacturers' representative to act in its behalf in that territory. This representative, a selling corporation chartered in the state of New York, had its head office in New York but maintained sales offices in a number of Far Eastern cities, including Tokyo, Shanghai, Hongkong, and Singapore. These offices usually were incorporated separately under local laws, but with a majority of the stock in each company held by the directors of the New York company. The representative acted for more than 100 American manufacturers, none of whom produced competing lines. It carried no stocks at the sales offices and did not order for its own account. The salesmen of the representative secured indents from the wholesalers and retailers in the districts of their respective offices, and sent these indents to the manufacturers represented. The representative

did not guarantee customers' credits, but its office managers used discretion in booking indents. The indents taken by the office managers were subject to confirmation by the manufacturers. The representative received a 10% commission on sales.

The representative also controlled a subsidiary organization in New York devoted to shipping and financing. When any manufacturer represented preferred, the representative sent the indents to this organization, which transmitted them to the manufacturer as its own orders. In such transactions, this subsidiary organization assumed all credit risks. From the point of view of the manufacturer, the transaction was essentially a domestic one, as the manufacturer received payment in New York, and the subsidiary organization took advantage of all cash discounts offered. In return for its services in making and financing shipments, the organization made a small charge to the foreign purchaser, based on the amount of the invoice.

Among the first orders which the Sherrill Razor Company received from the Far East after the appointment of the representative was one for 2,000 dozen blades from Fong Chiang,² a Chinese druggist in Shanghai who operated both as a wholesaler and as a retailer. The company sent the merchandise by parcel-post to the Shanghai branch of its bank. Before putting the draft on the purchaser through the bank, the export manager of the company questioned the advisability of the company's paying the interest charges. The total invoice amount of the order was \$1,200, which represented the quoted price of the blades c.i.f. Shanghai at 60 cents per dozen. The probable parcel-post time to Shanghai was a month and a half, and since an equal time probably would be required for the purchaser's money to reach New York, interest charges on the bank's advance against the draft would be based on a period of approximately 3 months. The current rate of interest on such drafts was 6%.

The export manager knew that merchants in the Far East were in the habit of paying interest on all drafts drawn on them for purchases. This was true not only in Shanghai but in all cities of the Far East. The custom probably originated because of the great distance of most Far Eastern points from the port of original shipment. From New York to Java, for instance, one-way communication required practically 2 months, so that on

² Fictitious name used for purpose of disguise.

a 60-day draft about 6 months elapsed between the shipment of goods from New York and the receipt of the purchaser's payment at a New York bank. So firmly established was the custom in the Far East that the banks in that territory included interest charges as a regular item on the charge sheets which they presented with drafts to purchasers. Competitors of the Sherrill Razor Company followed the established practice throughout the Far East. The razors sold by those manufacturers were mainly of different designs from those of the company, and were sold to so limited an extent that the company did not consider the competition there so serious as it was in other parts of the world.

The vice-president of the Sherrill Razor Company did not favor the policy of charging interest to the Chinese purchaser. Razors were sold at a narrow margin of profit, but razor blades were high-margin goods. The vice-president pointed out further that, in fixing its prices for c.i.f. quotations to all parts of the world, the company had allowed for contingencies and that at the level of prices quoted the company could assume interest charges without reducing its profits unduly.

The company decided to follow its usual practice, and to pay the interest charges on drafts drawn on purchasers in the Far East.

COMMENTARY: This case presents from a different point of view essentially the same problem already discussed in the case of the Ameroid Tire and Shoe Company³ and in the commentary on that case. In line with the reasoning developed in that commentary, the decision of the Sherrill Razor Company in the present case was correct.

It is noteworthy, however, that the company apparently based its decision to pay interest charges more on its own ability to assume such payment than on any ground of principle. To be sure, prices had been fixed at a level which readily permitted the adoption of such charges because of the large margin of profit. But there is no indication that prices were so fixed because of the desirability of including interest charges. Rather does it seem that the payment of interest charges followed from the existence of a large margin of profit and that the margin existed because of the nature of the product and of its manufacture.

The company quoted c.i.f. prices to all parts of the world and it is

³ See page 242.

interesting to consider whether this practice would or should have any effect on the assumption of interest charges by the company. There can be no doubt that the quoting of prices c.i.f., f.o.b., or f.a.s. has no effect on such interest payments. If, as a matter of principle, a manufacturer ought to pay the interest charges on advances secured from a bank against its drafts of foreign purchases, the mere method of quoting prices cannot have the slightest effect on that principle. On the other hand, in quoting prices c.i.f., a manufacturer, even if not quoting in foreign currency, must allow a margin for fluctuations and differences in rates and unforeseen charges. This allowance adds appreciably to the usual margin of an f.o.b. quotation, so that a manufacturer quoting c.i.f. may be in a more favorable position to pay interest charges than a manufacturer who quotes f.o.b. on a closely figured margin. As in the present case, this increased ability to pay may make it easier for the manufacturer to reach a decision to assume interest charges even though it does not affect in any way the principle of the decision itself.

December, 1925

P. W. T.

HAMLEN UPHOLSTERY COMPANY ¹

MANUFACTURER—ARTIFICIAL LEATHER AND UPHOLSTERY

INTEREST—*Interest Charges on Foreign Drafts.* In 1924 a company manufacturing artificial leather and upholstery decided to secure advances from its bank against drafts on foreign customers, instead of sending the drafts forward for collection. Because of its widely distributed markets and the competition it had to meet, the company decided to adopt no uniform policy in regard to the payment of interest charges on such drafts, but to vary its practice in accordance with business usage and conditions of competition in particular markets.

FOREIGN DRAFTS—*Bank Advances on.* A company manufacturing artificial leather and upholstery always had sent drafts which it drew on its foreign customers forward for collection. As its foreign sales were increasing, and since under this policy it did not receive payment until several months after shipment, the company decided to secure advances from its bank on such drafts.

(1924)

As a result of its decision to secure bank advances against its drafts on foreign customers instead of sending such drafts forward for collection, the Hamlen Upholstery Company considered

¹ Fictitious name used for purpose of disguise.

whether it should pay the interest on these advances or whether the interest should be charged to the customer.

The office of the Hamlen Upholstery Company, which manufactured artificial leather, waterproof cloth, and other varieties of upholstery, was in Boston. The company controlled several mills in different parts of New England. In addition to its distribution in the United States, the company sold its products in several foreign countries. The company had no export manager. Its export sales had been developed under the supervision of an official whose primary duties were in connection with other departments, and who, accordingly, had relatively little time to devote to foreign selling. The company's export sales in 1923 amounted to nearly \$500,000, which was about 2% of total sales.

In the Far East the company sold through a manufacturers' representative who placed no orders for his own account but secured indents from wholesalers on a commission basis. The company followed a similar sales method in Australasia. In Scandinavia the company sold to an exclusive wholesale agent who carried stocks and distributed them in Norway, Sweden, and Denmark. The company sold in no other European countries. In the South American countries in which it made sales, the company was represented by exclusive resident agents whom it paid on a commission basis.

In making shipments to foreign customers, the Hamlen Upholstery Company ordinarily drew 30-day or 60-day drafts on the purchasers. Export sales had developed so casually and formed so small a part of total sales that the company never had considered securing advances from its bank on these drafts on foreign customers. The company always had sent such drafts forward for collection. On many foreign sales, the company did not receive payments for several months after the goods were shipped. On a 60-day draft on a customer in Java, for example, fully 6 months elapsed between the drawing of the draft and the arrival of the funds in New York; on a 60-day draft on a customer in Buenos Aires, more than 3 months elapsed.

In 1924, because it appeared that its foreign sales would continue to increase, the company decided to secure bank advances against the drafts on foreign purchasers. The strong financial position of the company would make such a policy practicable

without regard to the standing of the customers on whom the drafts were drawn.

When a manufacturer secured a bank advance against a foreign draft, the bank at once credited the amount of the advance to the manufacturer's account. Ordinarily, the full amount of the draft was advanced. Banks charged a commission, ranging from $1/10$ of 1% to $1/2$ of 1% for making such advances. This commission was intended as a service charge to cover the expenses of handling a draft. If the draft was in a foreign currency, the bank made allowance for such a commission, as well as for interest on the advance, if paid by the drawer, in fixing the rate of exchange at which the proceeds of the draft were converted. Occasionally, banks purchased foreign drafts outright, but this practice was becoming rare. In such a case, interest on the amount of the draft from the date of purchase to the date of receipt of the funds was figured in the purchase price.² In any event, when a bank made an advance against a draft, the manufacturer received immediate possession of the funds, and the bank charged interest on the amount advanced from the date of the advance to the date of the receipt of the actual proceeds of the draft. This interest charge might be borne by the manufacturer or by the purchaser on whom the draft was drawn. The Hamlen Upholstery Company deliberated as to what policy it should follow in this respect.

In the Far East, importing merchants paid interest charges on drafts as a matter of course, and banks with branches in the Far East included interest as one of the regular items on their charge sheets to resident purchasers. In Europe the practice varied; in some instances the interest charges on the drafts were paid by the manufacturers and in others by the purchasers. The Hamlen Upholstery Company's exclusive agent in Scandinavia made payments by funds cabled to New York prior to shipment. Merchant importers in South America, for the most part, were not accustomed to paying interest charges. Most English and

² It should be noted that in actual practice the terms "selling a draft" and "discounting a draft" are used somewhat loosely. Strictly speaking, a bank does not buy a draft except in the case of an outright purchase without recourse. The bank then is subrogated to all the rights of the drawer. Similarly, a bank discounts a draft only when it deducts the interest charge before crediting the drawer. If the interest charge is made separately or is borne by the purchaser, the bank, properly speaking, is neither buying the draft nor discounting it, but is simply making an advance against it.

German manufacturers did not charge interest to their South American customers. American manufacturers, especially those selling highly competitive lines, generally had followed this lead. The Hamlen Upholstery Company was one of the largest of its kind in the United States, but there were at least five competing manufacturers who sold their products in foreign countries and whose competition the company had to take into account.

The Hamlen Upholstery Company knew that many manufacturers followed a uniform practice, either paying the interest in all cases or charging it forward in all cases. Generally, manufacturers who paid the interest on drafts drawn on foreign purchases either added enough to their export quotations to cover the amount of the interest or else operated on margins of profit large enough to absorb that amount.

The Hamlen Upholstery Company concluded that, in view of its widely distributed markets, the competition which it had to meet, and the variations in the policies of manufacturers and in the customs of countries in regard to the payments of interest charges, the wisest plan was for the company not to establish a uniform policy but to vary its practice in accordance with the trade usages of particular markets and with conditions of competition.

COMMENTARY: There are two principal points involved in this case. First, should a manufacturer secure bank advances against his drafts on foreign customers, or should he send such drafts forward for collection? The second follows on the first. If a manufacturer does secure such advances, should he pay the interest on them, or should he charge the interest to the foreign purchaser?

The first question turns wholly on the actual dollars and cents lost or gained, and hardly requires discussion. In sending drafts forward for collection, a manufacturer is tying up, sometimes for considerable periods, the funds represented by the drafts. If he can have those funds advanced to him, and at the same time is charging the purchaser with the interest on the advance, there is no question at all as to the saving to be gained by securing such advances. If he himself pays the interest, the question is whether he can obtain more from the use of the money than is involved in the payment of interest. Ordinarily he can, and merely from the point of view of freeing tied-up capital it

usually is advisable to secure such advances rather than to send drafts forward for collection.

In the present case, the Hamlen Upholstery Company's export sales developed slowly, and in the beginning, with small amounts represented, it was natural that the company should have sent its drafts forward for collection. As sales increased, it was equally natural that the company should have considered the possibility of using the money to better advantage elsewhere. On that point the company's decision, therefore, seems quite sound.

The second point has been discussed from different points of view in the commentaries on the cases of the Ameroid Tire and Shoe Company³ and of the Sherrill Razor Company⁴ where the proposition was developed that on principle such interest charges should be paid by the manufacturer.

In the present case, the Hamlen Upholstery Company evaded the issue entirely by deciding to consider interest charges like any other competitive element, to be paid where necessary or customary, and to be charged forward where possible. The company made no decision on principle, but considered the matter simply from the angle of expediency.

December, 1925

P. W. T.

³ See page 242.

⁴ See page 247.

ALTON COMPANY¹

WOMEN'S SPECIALTY STORE—SILK DRESS GOODS

STYLE CYCLE—*Style Leadership in Merchandising Goods in High-Grade Retail Store.* A high-grade specialty store, which had sold silk dress goods successfully in 1921, received some calls from customers for similar goods in January, 1922. In the middle and latter part of 1921, sport silks of lower quality had been sold by medium-grade department stores. In 1922, sport silks were not being stressed in current trade bulletins and fashion publications, and few were being shown in the exclusive specialty shops. Because this store had a reputation for style leadership, the merchandise manager thought it unwise to buy novelty silks that had been popular the previous season. Against his advice, the buyer for the silk dress goods department bought \$2,000 worth of sport silks early in 1922. Little demand was experienced, and mark-downs had to be taken, resulting in a substantial loss on the entire purchase.

(1922)

Early in January, 1922, the silk dress goods department of the

¹ Fictitious name used for purpose of disguise.

Alton Company, a women's high-grade specialty store, received some calls from customers for sport silks of heavy texture in various weaves. Similar goods in various grades and colors had been sold extensively during 1921. From the store's records of February, March, and April, 1921, it was found that the department had sold approximately 3,000 yards of these sport silks at a substantial profit. Although the current trade bulletins were not stressing sport silks, particularly in the expensive qualities, several manufacturers of novelty silks were producing these materials. The silk buyer desired to place an order for sport silks, because he believed that they would sell at a profit. The merchandise manager, however, was doubtful as to the desirability of placing the order. Although he agreed with the buyer that the profits from the sale of this silk material during 1921 had been exceptionally favorable, he thought that he could distinguish a distinct trend away from sport silks, and that a loss from mark-downs would result if the order were placed.

Sport silks had become popular during the spring season of 1921. Three small exclusive specialty shops located approximately six blocks from the Alton Company had been the first in the city to offer such silks. In January, 1921, after the few patterns offered by these stores had been sold at high prices, the Alton Company had purchased about \$3,000 worth of the silks. Although it had been necessary to sell them at high prices because of their high quality, the store had experienced no difficulty in disposing of them; cheaper sport silks had not appeared on the market. There had been no competition at first from either the near-by specialty stores or the department stores.

Early in February, 1921, two specialty stores, competitors of the Alton Company, had advertised similar materials at approximately the same prices as those offered by that company. The demand for these high-grade sport silks had become stronger during February and had increased heavily during March. Toward the last of March, two large department stores selling medium-price merchandise had advertised sport silks at substantially lower prices than were asked by the specialty stores. The comparison bureau of the Alton Company had found these silks to be much lighter and of poorer quality than the silks which had been on the market previously. Soon these cheaper sport silks had been sold not only by the near-by department stores which

carried a medium grade of merchandise, but also by other stores which dealt in cheap grades. Although the sport silks shown by these stores had been inferior to those sold by the Alton Company, nevertheless, the patterns and weaves had been sufficiently similar to cause a decrease in the company's sales of the silks to customers demanding exclusive styles. The demand, however, for the high-priced sport silks had not entirely ceased when the season closed.

The merchandise manager was convinced that sport silks were following a definite cycle of popularity. First they had appeared in the exclusive specialty shops, then in specialty stores like the Alton Company, and finally in department stores and dry-goods stores. Gradually, as the season had progressed, the quality of the sport silks had been reduced to meet the demand of customers with smaller incomes. The merchandise manager was convinced, furthermore, that this movement through 1921 toward cheaper sport silks indicated that the clientele to which the Alton Company catered would not purchase sport silks in any quantity in 1922. He believed that the calls which the company had received in 1922 for sport silks were from a few customers who followed old styles. Since a majority of the customers of the Alton Company demanded the latest styles, and since the store had established a reputation for style leadership, the merchandise manager thought it unwise to buy novelty silks that had been popular the season before.

In an attempt to gage the popularity of sport silks in 1922, however, the merchandise manager spent three days on the selling floor. At the end of the three days he reported to the buyer that he was more convinced than ever that a loss would result if sport silks were purchased. He had observed that the type of customer who had purchased the high-quality sport silks the year before now was inquiring for sport woollens. This apparent tendency toward sport woollens was in accordance with the prediction of several fashion publications, and also with the ideas which the merchandise manager had obtained from the best authorities on style in the markets. The comparison bureau, furthermore, had reported that few patterns of sport silks were being shown in small exclusive specialty shops. The merchandise manager explained to the buyer that the company was obliged to guard against any action which would give the trade a wrong

impression as to style. Aside from the financial loss, the company had its reputation for style leadership to protect, and it could not afford to advertise sport silks if they were not the most up-to-date materials that could be secured, even though some demand existed for them.

Contrary to the advice of the merchandise manager, the buyer, when offered a good assortment at an attractive price, placed an order for sport silks amounting to \$2,000. The silks were received and placed on sale in February. Toward the middle of March a few sales were made. After that time only a few yards were sold and in June the department was obliged to place about one-half of the sport silks on sale at a reduction which resulted in a substantial loss on the entire purchase.

COMMENTARY: This case describes the experience of a women's high-grade specialty store which encountered unsatisfactory results in an endeavor to merchandise a particular style in the later stages of the style cycle.

A successful style from the time of its origin to the time of its final extinction passes through certain recognizably distinct phases. These phases constitute the style cycle.² The first of these phases is the *distinctiveness* stage. The demand in this phase comes primarily from persons who desire merchandise of distinctive character in order to manifest individuality in judgment or taste, or to display leadership in setting fashions. In this stage of the style cycle, demand centers in high-grade specialty stores.

The second phase of the style cycle is the *emulation* stage. The buying motive here is the desire to keep in fashion—to conform to the prevailing mode or style. In this stage of the style cycle, demand is likely to center in department stores. In order to develop successfully into the *emulation* stage, a style must have passed successfully through the *distinctiveness* stage.

Once the *emulation* stage is reached, however, persons influenced by the motive of *distinctiveness* want no more of the popular fashion, and, consequently, turn to something new.

The third phase of the style cycle is the *economical emulation* stage. In this stage a style that has achieved success in the *emulation* stage is exploited in cheaper fabrics and produced in large quantities. The buying motive here is that of keeping up with the current fashions at a lower cost. In this stage, a particular style is sold in lower-grade

² Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, p. 167.

department stores and bargain basements. As soon as this stage has been reached, a style proceeds rapidly and surely to extinction. The very forces which caused its popularity finally operate to destroy it.

In the case of the Alton Company, a mistake was made in endeavoring to follow the demand for sport silk out of the *distinctiveness* stage and into the later stages of *emulation* and *economical emulation*. The few inquiries received from customers for sport silks early in 1922 were not representative of the demand of a majority of this store's clientele. Because of the importance of the *distinctiveness* motive, customers who had purchased sport silks in the previous year then were inquiring for sport woollens. Unless it wished to become an entirely different type of store, the Alton Company could not have afforded to follow generally the policy of endeavoring to merchandise in the later stages of the style cycle.

Principles of business management exemplified in this case may be stated as follows:

1. A retail store must recognize its position in the style cycle and merchandise accordingly.
2. The same store cannot cover successfully both the *distinctiveness* and the *emulation* phases of the style cycle.
3. A women's high-grade specialty store must rely largely on appeal to the buying motive of distinctiveness.

November, 1925

M. P. M.

FARRINGTON COMPANY¹

DEPARTMENT STORE—WOMEN'S SUITS

STYLE CYCLE—*Premature Purchase of New Style by Department Store.*

After a period of several years, during which women's suits had not been in fashion, a new style, known as the O'Rossen suit, was originated in Paris in the fall of 1923. This new style was adopted immediately by American suit manufacturers, and suits of this type were introduced simultaneously in high-grade specialty stores and department stores. In common with other department stores, this company placed substantial orders for these suits for the spring season of 1924. The expected demand for suits failed to develop, and this company's sales of suits were even lower for the spring of 1924 than they had been for the same period of the previous year.

(1924)

The Farrington Company, founded in 1878, was the largest department store in an eastern city. It was one of the most con-

¹ Fictitious name used for purpose of disguise.

servative stores in the city, and it had a stable clientele. Catering to the medium and high-class trade, its business had grown until the annual volume of sales was close to \$30,000,000. The store was located in the heart of the department store district. In January, 1924, the buyer of women's suits had to decide whether more suits were to be purchased for the spring season; a few had been purchased in December. In the event that suits became popular, a large stock was necessary in order that the demand might be met.

It was generally recognized among buyers of women's suits that the last good suit season in this country had been in 1919. The failure of suits since that time was attributed to the popularity of dresses. They had been so attractive and were made to sell so cheaply that they were preferred to suits.

Most of the styles that achieve a vogue in this country originate abroad. In the fall of 1923 suits were worn by the women at exclusive resorts such as Deauville, Nice, and Cannes. In October a habit maker named O'Rossen brought out a severely tailored women's suit which proved to be popular abroad. Soon after, the fashion publications, such as *Harper's Bazaar* and *Vogue*, were predicting a suit season for spring.

The *Dry Goods Economist*² said: "Leading among all spring fashions is the revival of the strictly tailored suit. As a veritable rage the O'Rossen suit has found its way to department stores and specialty shops alike."

By the first of January, 1924, practically all the style experts and suit manufacturers were pushing suits. Salesmen were sending in substantial orders. Some manufacturers who had gone into other lines again turned to making suits. The models shown to suit buyers were different from those shown for a long time past, and the range for selection was wider. The coats were narrowly cut, and they were short. It was said that the only seasons in which suits had been much in demand were those in which short jackets were in style. Since the popularity of a style often brought about its disappearance, dresses, because of their cheapness at this time, might have been expected to be supplanted by suits.

One difficulty with the straight-line severely tailored suit was

² December 22, 1923.

that it did not look well on all women. It seemed to be primarily designed for the slim figure. Furthermore, it had to be made by a good tailor if it was to look well. The possibility thus existed that the high cost would prove a bar to the popularity of suits in the spring season.

Ordinarily there were regular channels through which a style apparently had to pass. The buyers from the high-class American manufacturers and stores attended the openings of the leading Parisian dressmakers and brought to this country models which were sold in the highest-class shops. Successful styles were taken up by specialty stores and high-grade department stores; medium-price department stores stocked a style when they saw that it was going to become popular. The cheaper-price manufacturers copied it later, and as the demand increased, other manufacturers reproduced the style in the cheapest possible fabrics until it was finally sold in bargain basements.

While the highest-class specialty shops in the city in which the Farrington Company was located had stocked a few O'Rosen suits, the sales of these suits at this time did not indicate their prospective popularity for the spring season. The suit season at best would be about six weeks in length, the height of the demand coming the week before Easter.

The buyer for the women's suits department of the Farrington Company purchased additional suits in January on the expectation that a good suit season was in prospect. The total sales for the season, however, were less than they had been for the same period of the previous year, which had not been considered a good suit season.

COMMENTARY: This case describes an experience common to a number of department stores in the spring of 1924 in the premature purchase of a new style.

From its origin until its eventual disappearance, a successful style moves through certain recognizably distinctive phases in sequence; these phases constitute the style cycle.

After a new style of woman's garment, for example, has been originated in Paris, it is imported into New York to be taken up by the foremost dressmakers; it is sold as *distinctive*. The next stage in the style cycle is the copying of the style, perhaps with minor modifications, by the manufacturers of women's garments who produce high-quality articles by factory methods. They appeal to the motive of *emulation*. Subsequently, if the style is

achieving success, it is exploited in cheaper fabrics and produced in large quantities. At that point the motive of *economical emulation* comes into play, and the style thence proceeds rapidly to extinction. A style is not counted successful until its popularity is assured, and yet as soon as a style commences to attain popularity, the forces that eventually will cause its extinction begin to operate.

Distinctiveness, emulation, and economical emulation mark three distinct stages in the style cycle. A manufacturer or merchant, such as a department-store manager, for example, finds it advantageous to decide in which stage of the style cycle he will operate and then to coordinate his merchandising plans accordingly. The determination of the grade of goods to be offered, the selection of the buying motive to which to appeal, and the choice of the type of customers at which to aim, are interdependent decisions from the merchandising standpoint.³

In consequence of the lack of popularity of women's suits, the suit business was in a depressed condition. Manufacturers, therefore, immediately seized upon the O'Rossen suit as soon as this style showed signs of success abroad. In this country, O'Rossen suits were introduced practically simultaneously into high-grade specialty stores and into general department stores. Thus, this particular style did not have a chance to go through the "distinctiveness" stage. A successful traverse of this stage is a requisite for development into the "emulation" stage, which is the point where general department stores can begin to sell a particular style effectively. The O'Rossen style of suit was not given a chance to develop naturally. Hence, it was a failure in department stores.

Two significant principles which are exemplified in the case may be stated as follows: (1) A retail store handling style merchandise must recognize its position in the style cycle and merchandise accordingly; (2) The success of a style in the preceding stage is requisite to its development into the next stage of the cycle.

November, 1925

M. P. M.

³ Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, p. 167.

SORENTO COMPANY¹

DEPARTMENT STORE—HOSIERY

STYLE MERCHANDISE—*Bought by Retailer from Wholesalers Instead of Manufacturers.* This department store, which regularly had purchased hosiery directly from manufacturers, temporarily changed its policy in the depression of 1920-1921 to one of buying from wholesalers. The

¹ Fictitious name used for purpose of disguise.

tendency of hosiery to become style rather than staple merchandise caused, in 1923, a reconsideration of the regular buying policy. Since by purchasing from wholesalers the store could place orders in small quantities and secure quick deliveries, it decided to continue this policy. The resultant lower margin of profit was expected to be offset by increased rapidity of stock-turn.

(1923)

The Sorento Company operated a department store which had an average sales volume of \$1,000,000 annually. Merchandise of medium-high grade was sold, and credit was extended to customers. The store was located in an eastern city of 100,000 population within 20 miles of a city with a population of approximately 1,500,000.

The Sorento Company sold a complete line of women's hosiery at prices which ranged from 59 cents a pair to \$2.95 a pair. Hosiery was purchased directly from the manufacturers. Although no fixed rate of mark-up was set for the hosiery department, the average mark-up desired was 33 1/3% of net sales. The department was charged with all direct expenses, interest on the average inventory at 6% per annum, and general overhead expenses, which were apportioned among departments in accordance with sales volume.

Women's hosiery for many years had been considered by the executives as staple rather than style merchandise. In 1919, however, hosiery began to be purchased more and more on a style basis; that is, customers began to pay attention to color, pattern, and material, in addition to price and durability. The price range of the style hosiery was from 75 cents to \$2.95, with the most popular price \$1.95.

The sales and the gross margin and expense percentages of the hosiery department from 1919 through 1921 are tabulated in Exhibit 1.

The loss in 1921 was the result of the liquidation of a large inventory at a substantial reduction in prices.

In September, 1921, when it had an overstock of women's hosiery, the Sorento Company temporarily shifted its policy of buying hosiery directly from manufacturers to a plan of buying from wholesalers. During the years immediately prior to 1921, the amount of the average inventory at cost in women's hosiery was from \$13,000 to \$17,000; but in September, 1921, the in-

EXHIBIT I

SALES AND GROSS MARGIN AND EXPENSE PERCENTAGES OF THE
WOMEN'S HOSIERY DEPARTMENT OF THE SORENTO
COMPANY FROM 1919 THROUGH 1921

(Net Sales = 100%)

Year	Volume of Net Sales	Percentage in Staple Hosiery	Percentage in Style Hosiery	Departmental Gross Margin	Departmental Expenses
1919	\$45,000	90%	10%	33%	30%
1920	50,000	85	15	33	29
1921	60,000	75	25	17	27

ventory amounted to \$27,000 and was badly assorted. In the spring of 1923, when sales increased, the hosiery buyer took up the question whether to continue to purchase women's hosiery from wholesalers or to return to the policy of purchasing directly from manufacturers.

Manufacturers had sold hosiery to the Sorento Company on terms of 2% 10 days, 60 days extra, f.o.b. factory, with a minimum order of one-half case. A half-case contained 30 dozen pairs of hose, which could be secured in assorted colors, materials, and sizes, in quantities from one-quarter dozen to one dozen, depending on the unit of boxing. Since hosiery manufacturers from whom the Sorento Company had purchased up to September, 1921, did not maintain in-stock departments, the date of delivery usually was 3 or 4 weeks after the order had been placed. Some other hosiery manufacturers, however, did maintain in-stock departments and were able to make deliveries promptly. Charges for freight and express varied from 1% to 5% of the billed cost of the merchandise. In the case of staple merchandise, a delay of 3 or 4 weeks had not been necessarily a disadvantage, but for hosiery in which the style element predominated, such a delay frequently was a disadvantage, because the merchandise sometimes arrived after the demand for it had declined.

During the period from 1919 to 1922, three or four style colors usually had been popular for an entire season, and several other colors popular for shorter periods. The spring season lasted from February to July, and the fall season from August to January. Hosiery styles were in many respects affected by styles of shoes, dresses, coats, and suits.

Demand from customers for hosiery of a specific style usually reached the Sorento Company approximately five weeks after the demand began in New York, about three weeks after it appeared in the specialty stores in the near-by large city, and at about the same time that it reached the department stores in that city. The Sorento Company aimed to be the first store in its city to have the latest popular styles in hosiery. In purchasing directly from manufacturers, the company had had to anticipate styles before they reached the specialty stores in the near-by large city, although the salesmen of the manufacturers kept the Sorento Company informed regarding the styles popular in New York and elsewhere.

Demand in New York was not always a reliable basis for forecasting demand in the locality in which the Sorento Company was located. Occasionally, merchandise ordered on the basis of the styles popular in New York had not sold well and ultimately had been disposed of at a loss.

Wholesalers' prices on hosiery ranged higher than those of manufacturers, and the terms granted were 2% 10 days, 60 days extra, f.o.b. the Sorento Company. For instance, hose to be sold by the Sorento Company for \$1.95 a pair could be secured from manufacturers for \$1.40 a dozen, whereas wholesalers asked \$15.50 a dozen for similar merchandise. Wholesalers would accept orders of any size and deliver the merchandise within 24 hours. A wide range of styles and colors always was available in the stocks of the 25 wholesalers from whom purchases were made. The management of the Sorento Company expected to purchase small lots of the new styles and test demand by placing them on display in the store, reordering such numbers as proved popular. In buying from wholesalers, it was thought that satisfactory operation of the hosiery department was possible on not more than one week's stock of the best selling style numbers, although in the more staple numbers a larger stock would be carried.

Before September, 1921, when buying from manufacturers, the Sorento Company regularly had placed orders in January for delivery in March, April, and May, and in July for delivery in October, November, and December, for from \$10,000 to \$12,000 worth of hosiery. Then, from time to time fill-in orders had been placed ranging from \$500 to \$1,000. All purchases were

billed as of the date of shipment. Fill-ins had been secured from the manufacturers when possible, although occasionally such purchases had been made from wholesalers, if manufacturers had not been able to supply the merchandise within the usual time.

The Sorento Company sold a few nationally advertised brands of women's hosiery, but such sales constituted a small proportion of total hosiery sales. Both the nationally advertised brands of hosiery and the same quality of unbranded hosiery, which had been purchased from manufacturers, were secured from wholesalers from September, 1921, to March, 1922.

In 1923 the Sorento Company decided to continue the purchase of hosiery from wholesalers. The increased rate of stock-turn to be secured by buying merchandise as it was needed was expected to offset the disadvantage of a lowered gross margin. The executives believed that, in general, purchase directly from manufacturers was desirable whenever this policy did not involve a lower rate of stock-turn.

In 1924, after following the policy of buying hosiery from wholesalers for three years, the buyer for the hosiery department had attained a stock-turn rate of 12 times a year, had maintained a satisfactory gross margin, and had kept the departmental expenses at 27% of sales. By 1924, hosiery had increased as a style line so that the stock and sales in the department were evenly divided between style numbers and staple numbers.

COMMENTARY: This case raises the question whether style merchandise sold in a department store should be purchased from manufacturers or wholesalers.

In purchasing from wholesalers, it was possible for the store to place small orders and to secure quick deliveries. Wholesalers' prices, however, ordinarily were higher than manufacturers' prices. On hosiery selling for \$1.95 a pair, a margin of 40% of the selling price could be secured in purchasing from manufacturers. On the same goods purchased from wholesalers, the available margin was 33.8% of the selling price. Neither of these figures included the 2% cash discount. In purchasing from manufacturers, it was necessary for the store to pay the charges for freight and express, whereas near-by wholesalers delivered goods to the store free of charge. From the standpoint of the

margin of profit available, a clear advantage was to be secured in buying from manufacturers.

In making its decision, the management of the store evidently attached much importance to the possibility of securing a more rapid rate of stock-turn by purchasing hosiery from wholesalers. It does not appear, however, that the rate of stock-turn need necessarily have been particularly low under a policy of purchasing hosiery from manufacturers. The minimum-size order was one-half case, containing 30 dozen pairs of hose, which could be had in assorted colors, materials, and sizes. With annual sales of \$60,000 assumed in the hosiery department, and \$2 a pair taken as a fair average price, the number of pairs of hosiery sold could be estimated at 30,000. With sales of this volume, there need have been no apprehension that a minimum order requirement of 360 pairs would decrease the rate of stock-turn. Neither does it appear that the delivery interval of three to four weeks would have interfered seriously with the rate of stock-turn in case a policy of buying from manufacturers had been adopted. It is to be noted also that the delivery interval was much shorter in the case of hosiery manufacturers who maintained in-stock departments.

From the description of the Sorento Company's buying methods previous to 1921, it seems probable that the difficulties experienced in the hosiery department were attributable to poor coordination of sales, stocks, and purchases, and perhaps even to some speculative buying, rather than to the policy of purchasing from manufacturers.

In reaching its decision, it does not appear that the Sorento Company gave sufficient consideration to the change that was taking place in the style characteristics of hosiery. As shown by the company's own records, the proportion of style to staple hosiery sold was steadily increasing. During this particular period, a marked acceleration of the shift of hosiery from the class of staple merchandise to the class of style merchandise was a matter of common observation. Such a shift was bound to have a distinct influence on the channels of distribution. In the case of merchandise which is subject to a rapid rate of style change, wholesalers are at a distinct disadvantage. By the time the goods have been sent from the manufacturer to the wholesaler, and from the wholesaler to the retail store, they may be out of style; this is likely to be particularly true as regards popular colors in hosiery. Wholesalers naturally prefer not to take chances with merchandise subject to a high degree of style risk. It follows that retail stores, especially department stores, which sell mainly in the *emulation* stage² of the style cycle, cannot be sure of securing desirable styles from wholesalers.

² Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 164-167.

Apparently these considerations were not given sufficient weight by the Sorento Company in its decision. It is a general principle of marketing that style merchandise commonly is sold directly from manufacturers to retailers without the intervention of wholesalers.³

November, 1925

M. P. M.

³ See case of the Drury Hosiery Mills, 1 H.B.R. 276; commentary, 2 H.B.R. 476, for decision of a hosiery manufacturer to sell directly to department stores.

SHREWSBURY COMPANY¹

DEPARTMENT STORE

MERCHANDISING ORGANIZATION—*Departmental Form of, Preferred to Functional Form in Department Store.* The company had 7 buyers to purchase merchandise for the 28 selling departments in its department store. Most of the time of these buyers was absorbed by their buying duties. Believing that inadequate attention was being given to the work of selling and sales promotion under this plan of organization, the company decided gradually to replace the 7 buyers with 28 department managers who would be responsible for both the buying and selling functions in their respective departments. Thus, the merchandising organization was developed according to groups of commodities sold, rather than on a functional basis.

(1919)

A majority of the capital stock of the Shrewsbury Company, a department store, was owned by the president, the vice-president, and the secretary-treasurer. In addition to performing the duties required by their positions as officers of the corporation, each of the three executives acted as merchandise manager for one-third of the departments in the store. The company employed seven buyers. The buyers not only ordered the merchandise, but also inspected it upon its arrival and supervised the activities of the salespeople. The merchandise managers were convinced that under the existing arrangements the buyers were not sufficiently in touch with the selling phase of the store's activities. In the latter part of 1919, the executives proposed to make certain changes in the merchandising organization of the store.

The Shrewsbury Company, founded in 1818, was located in an eastern industrial city of approximately 250,000 population,

¹ Fictitious name used for purpose of disguise.

situated approximately 5 hours by express train from New York City. The store sold a better quality of merchandise than that offered by any other department store in the city. In 1918, total net sales of the store's 28 departments amounted to \$1,500,000. Approximately 70% of the customers purchased goods on charge accounts.

The personnel of the store consisted of 115 salespersons and about 185 other employees. One of the 7 buyers purchased for only 1 department, but each of the others bought for from 2 to 7 departments. Some of the buyers had been developed from the store's personnel. They received fixed salaries and commissions on sales. Rates of commissions and salaries were based on the management's estimate of the individual buyer's value to the store. The salaries of the company's buyers compared favorably with those of buyers in other stores of similar size.

The buyers had three main duties: buying, inspection of merchandise received, and supervision of selling. The buyers were free to divide their time among these functions as they saw fit. At least once each month the buyers went to New York to purchase merchandise. Each buyer made purchases for his departments according to his own judgment, subject only to the approval of the officer who acted as merchandise manager for his departments. Stock records were maintained only in the outer-garment department, but the management contemplated their use in some of the small-wares departments as well. Neither the merchandise managers nor the buyers planned sales definitely by merchandise classifications or price lines.

When not on purchasing trips, the buyers spent part of their time in the receiving and marking room, inspecting the merchandise which had arrived. The foreman of the receiving and marking room was responsible for the routine operations of that department.

The buyers supervised the display of merchandise and the activities of salespeople for their departments. The buyers' duties in regard to the salespeople were chiefly educational; the store's floormen were directly responsible for the attendance of salespeople and for the quality of service which they gave to customers.

Each buyer had a private office, not located in any of his selling departments. The officers of the company believed that the

buyers, when not on purchasing trips, spent most of their time either in the receiving and marking room or in their offices attending to clerical work and that they devoted only a small part of their time to actual sales problems. The management was of the opinion that the buyers determined what styles and quantities of merchandise to purchase from suggestions given by the manufacturers and wholesalers and from the want slips which the salespeople filled out when customers asked for merchandise which the store did not have in stock.

The merchandise managers were convinced that the store's organization was such that buyers inevitably would emphasize the duties connected with the buying of merchandise to the neglect of actual selling and of sales promotion plans. Because of this tendency, the merchandise managers proposed gradually to eliminate the position of buyer. Whenever a buyer left the employ of the company, or was promoted to another position, the plan was for the management to promote a sales clerk in each of that buyer's departments to the position of department manager. The merchandise managers believed that from among the salespeople who had attended high school for at least one year persons could be selected who were familiar with the styles, the quality, and the sizes of merchandise sold in their departments, and who possessed some executive ability.

The department managers, by concentrating their attention on the merchandise sold in their departments, would become specialists as to styles, sizes, and quality, and also as to the best sources from which to purchase. The management proposed to have the department managers devote part of their time to selling merchandise on the floor. The merchandise managers expected that some of the department managers would make buying trips to New York or to other near-by cities only three or four times a year, while others would find it necessary to go to market every week or two.

The merchandise managers suggested that the department managers be paid from \$20 to \$25 a week plus commissions based upon the increase of net sales in the various departments over net sales for the previous year. The salaries proposed were approximately from 10% to 20% more than were paid first-class salespersons at that time. The buyers were receiving from \$40 to \$60 a week.

A sales manager was to be appointed and was to have as assistants a display manager and an advertising manager. The sales manager was to keep in touch with customers' demands, and was to plan sales events, merchandise displays, and advertising. Under the new organization, the merchandise managers would devote most of their time to the control of the department managers' purchases.

For each of the three merchandise managers the company was to employ an assistant at a salary approximately 10% higher than that paid a department manager. These assistants were to be young men of business education. They were to aid the department managers and the sales manager in the formulation of six months' sales plans and to undertake to standardize price lines. The assistant merchandise managers were to accompany the department managers on buying trips frequently, and were to assist in obtaining cooperation between the department managers and the merchandise managers.

The store decided to revise its merchandising organization as proposed. The management did not anticipate any increase in buying and management expense from the adoption of the plan, since department managers would spend only a portion of their time in purchasing. Because of the inexperience of the people who were made department heads, the large amount of educational work required, and the difficulty in obtaining competent executives, the management did not expect the new organization to operate smoothly for three or four years.

COMMENTARY: When a retail store expands its volume of business, at some stage in the development it becomes necessary to establish some division of labor; that is, an organization problem develops. It is then a question of the principles according to which the division of functions should be made. In the case of this store, it is evident that some development had taken place in the direction of a specialized buying organization. The 7 buyers who purchased goods to be sold in the 28 selling departments had little time for other duties. A logical development of the store organization in this direction would imply not only a specialized buying division, but also a specialized selling division. Such a grouping of store management functions would present a parallel to the common practice in chain stores, where the buying and sales promotion divisions commonly are two different parts of the organization. The alternative course is to develop the organization ac-

cording to groups of commodities sold, with department heads responsible for both the buying and the selling of the merchandise handled in their respective departments. That is the issue presented by this case.

Through the development of a specialized buying organization, certain benefits might accrue from the specialization. The qualifications for a shrewd buyer are not the same as the qualifications for a good salesman. It might be assumed, therefore, that if the buying and selling functions were separated in the store organization, each could be performed more effectively.

There are certain considerations, however, that outweigh these possible advantages of specialization of the buying and selling functions. In the first place, the merchandise sold in a department store is of widely diversified character. Also, seasonal and style factors have to be reckoned with in the case of women's wearing apparel and some other shopping goods. The need of specialized knowledge of particular markets, therefore, is likely to be greater than the need of specialized buying ability; and 28 buyers can have a more detailed knowledge of particular markets than can 7 buyers. At the same time, there is the necessity of coordinating this specialized knowledge of a particular market with a specialized knowledge of the sales problems of the particular department. In these respects, the problem of a department store differs greatly from that of a chain store handling largely staple merchandise.

Therefore, the decision of the company in this case to replace the existing organization of 7 buyers with 28 departmental managers is in accordance with sound principles of department store organization. The departmental form of merchandise organization, developed according to groups of commodities, is characteristic of stores that handle a wide variety of shopping goods.

October, 1925

M.P.M.

DOVER STORES CORPORATION¹

5-AND-10-CENT CHAIN STORES—STATIONERY

PURCHASING POLICY—*Emphasis on Quality.* The corporation, which operated a chain of 5-and-10-cent stores, decided to improve the quality of boxed writing paper which it sold for a fixed price of 10 cents per box. To secure a better quality of paper, the corporation had to pay a higher price and content itself with a lower gross margin. The reason for the change in quality was that merchandise in the corporation's stores was expected practically to sell itself, with a minimum of sales effort on the

¹ Fictitious name used for purpose of disguise.

part of employees. Following the change, sales of this item increased more than 20%.

GROSS MARGIN—*Reduction in, for Purpose of Offering Merchandise of Better Quality at Same Price.* In order to improve the quality of boxed writing paper which it sold for a fixed price of 10 cents per box, the corporation, which operated a chain of 5-and-10-cent stores, bought paper at a higher price, with the result that its gross margin on this item was reduced from $33\frac{1}{3}\%$ of sales to 30.6%.

SOURCE OF PURCHASE—*Change in, to Secure Merchandise of Higher Quality.* The corporation, which operated a chain of 5-and-10-cent stores, in order to improve the quality of boxed writing paper which it sold for a fixed price of 10 cents per box, changed its purchases from a source where the paper could be secured at \$9.60 a gross to a source where it was necessary to pay \$10 a gross.

AGGRESSIVE SELLING—*Effect of Necessary Lack of, on Purchasing Policy.* In the chain of 5-and-10-cent stores operated by the corporation, merchandise was expected to sell itself with a minimum of sales effort on the part of the employees. Therefore, in order to offer customers a better quality of boxed writing paper at the fixed price of 10 cents per box, the corporation made a change in the source of purchase involving a higher purchase price and a consequent reduction of gross margin on this item from $33\frac{1}{3}\%$ of sales to 30.6%.

(1925)

The Dover Stores Corporation operated a chain of 5-and-10-cent stores. The stationery departments of these stores sold boxed writing paper for which the company paid \$9.60 a gross. A manufacturer of writing paper offered to sell the company a substantially better quality of writing paper at \$10.50 a gross.

There were 100 stores in the chain of the Dover Stores Corporation. All the stores were located east of the Rocky Mountains, and the home office was in Philadelphia. For administrative purposes the company divided its territory into three sections: East, South, and West. The eastern section was bounded on the west by the Mississippi River, on the north by Canada, on the east by New England and the Atlantic Ocean, and on the south by Virginia, West Virginia, and the Ohio River. The southern section included all the territory south of the eastern section and east of the Mississippi River. The western territory included the territory west of the Mississippi River and east of the Rocky Mountains from Canada to Mexico. The annual net sales of the chain of stores amounted to about \$18,500,000. These sales were divided approximately as follows: 45% in the East; 30% in the

West; and 25% in the South. There was about the same number of stores in each section.

The Dover Stores Corporation purchased centrally all merchandise required by the stores and shipped it to them. The corporation endeavored to purchase merchandise which would give an average gross mark-up on selling price of $33\frac{1}{3}\%$ when sold at 5 cents or 10 cents. The required average gross mark-up varied slightly in different sections of the country because of differences in operating costs.

The total annual sales in all the stationery departments of the 100 stores amounted to about \$1,300,000. The stores sold special boxes of writing paper, containing 24 sheets and 24 envelopes, at 10 cents each. The annual sales of this type of boxed writing paper were about \$18,000 in the East, \$10,000 in the South, and \$20,000 in the West. The management considered this a good volume of sales for the particular type of paper. The average stock of writing paper of the entire company was turned about four times a year. The corporation purchased the specially boxed writing paper from the manufacturers at an average price of \$9.60 a gross at the factory.

The corporation did not advertise except through window displays. Any merchandise offered by the stores was expected to sell readily on its own merits. Sales employees were instructed not to use aggressive selling efforts; their duties were to give customers what they asked for, to wrap bundles, and to make change.

The Kilburn Paper Company², located in northern New York state, offered to make and box for \$10.50 a gross a much better grade of writing paper than that for which the Dover Stores Corporation paid \$9.60 a gross. The grade offered by the manufacturer was sold in department and drug stores at from 15 cents to 20 cents a box. The Dover Stores Corporation considered that, by selling this better quality of writing paper at 10 cents a box, the total yearly sales of boxed writing paper of this one type could be increased about 20%. Also, the management believed that the good value in writing paper would attract customers into the stores and thus increase the sales in the other departments which sold "impulse" merchandise. Nevertheless, because

² Fictitious name used for purpose of disguise.

the price offered by the manufacturer allowed a gross margin of only 27.1% on sales of the writing paper, the corporation refused the offer.

Usually the Kilburn Paper Company extended credit on its sales for from 30 days to 90 days. The Dover Stores Corporation, in view of the fact that it always paid cash for its purchases, suggested that the Kilburn Paper Company could afford to sell the paper at less than \$10.50 a gross. The manufacturer stated that, if the Dover Stores Corporation contracted to purchase 300,000 boxes of the writing paper during the year for cash, he would agree to sell the paper to the corporation for \$10 a gross and to make deliveries throughout the year whenever desired by the purchaser. The manufacturer also said that he would be able to sell the corporation annually 750,000 boxes of the writing paper at \$10 a gross. This price would allow the Dover Stores Corporation a gross margin on sales of the paper of 30.6% of sales.

The Dover Stores Corporation accepted the manufacturer's second offer. This decision was in line with the corporation's policy of offering customers merchandise of the best quality consistent with the fixed prices of 5 and 10 cents. This emphasis on quality was necessitated by the fact that the corporation, in order to keep its selling expense at a low ratio, expected any merchandise offered in its stores to sell readily on its own merits without advertising or aggressive selling efforts on the part of employees.

The sales of the type of writing paper purchased under this new agreement increased more than 20%.

COMMENTARY: This case on the purchasing policy of the Dover Stores Corporation raises the question of whether, in order to secure writing paper of higher quality to be sold at a fixed retail price of 10 cents, the corporation was justified in paying a higher purchase price, with a consequent reduction of its gross margin on this item.

It was desired to secure an average gross margin of $33\frac{1}{3}\%$ of net sales to cover expenses of operation and provide a net profit. The total expense ratio for the Dover Stores Corporation is not stated; it is to be borne in mind, however, that the gross margin secured by the corporation had to be sufficient to cover not only the operating expenses of its retail stores, but also the expenses of purchasing, warehousing, and general supervision of its stores. Since the rate of gross margin obtainable on boxed writing paper purchased at \$9.60 a gross amounted

to exactly $33\frac{1}{3}\%$ of its selling price, there was a strong *prima facie* argument for making no change in the source of purchase, especially in view of the fact that the retail price could not be raised. There are no indications that any reasons existed for a change in the source of purchase except to improve the quality, and thus the salability, of the merchandise.

On the other hand, the peculiar merchandising problem of 5-and-10-cent stores must be taken into consideration. All merchandise offered was expected to sell on its own merits. Sales employees were instructed to use no aggressive selling efforts. If aggressive sales promotion efforts were undertaken in 5-and-10-cent stores, it is obvious that selling expense would increase greatly in ratio to sales.

Where the maximum price for a single article is 10 cents, with a gross margin of $33\frac{1}{3}\%$, it is clear that no time can be devoted to sales stimulation or persuasion; otherwise, selling expense will exceed the gross margin. The customer is attracted into the store partly by the assurance that the maximum price of any article is 10 cents, but once the customer is in the store, the goods must sell themselves. Hence, the values must be so evident that no sales effort is required.

This reasoning leads to the conclusion that the corporation was justified in its decision to pay a higher purchase price for boxed writing paper of a better quality, to be sold at the fixed retail price of 10 cents. With the price remaining at 10 cents, the better quality of paper presumably could be expected to increase the volume of sales and the rate of stock-turn.

The decision in this case is in line with the general principle that 5-and-10-cent stores, where merchandise is expected to sell on its own merits with a minimum of sales promotion effort, must seek to secure the best quality of merchandise consistent with low prices, rather than to buy cheaply without respect to quality.

The established price policy of 5-and-10-cent stores may be compared with the policy of some department stores in establishing for each department a stated number of fixed retail prices in advance of the actual purchase of the merchandise. When retail prices are established on this basis, manufacturers are likely to be stimulated to find means of lowering production costs. Hence, with the growth of large-scale production and large-scale retailing, this pricing policy may have important economic results.

October, 1925

M. P. M.

HATCH COMPANY¹

DEPARTMENT STORE—DRESSES AND MILLINERY

COOPERATIVE BUYING—*Purchase of Medium-Price Merchandise for Department Stores.* A department store belonging to a cooperative buying association, formed for the purpose of buying medium-price dresses for 25 non-competing stores, voted in favor of extending the association's activities to include the purchase of medium-price millinery, because the management considered that medium-price merchandise was best suited to cooperative buying methods.

COOPERATIVE BUYING—*Not Suited to Purchase of High-Price Merchandise for Department Stores.* A department store belonging to a cooperative buying association, formed for the purpose of buying medium-price dresses for 25 non-competing stores, voted against the immediate extension of the association's activities to include high-price dresses, because it did not consider high-price merchandise so well suited to cooperative buying methods as medium-price goods.

(1925)

The Hatch Company, a department store, was a member of the Rand Association¹, a corporation which had been formed for the purpose of buying dresses for a group of 25 stores located in different cities throughout the United States. These dresses were sold in the stores at \$40 each. The managements of some of the stores in the association wished to increase the scope of cooperative purchases to include dresses to retail at \$62, and popular-price millinery. In this connection, the association requested the Hatch Company to cast separate votes as to whether these types of merchandise should be added to the Rand Association line.

The Hatch Company was located in an eastern city of about 150,000 population and sold merchandise of a better grade than that offered by any other department store in the city. The store building of 5 stories was situated on the main street of the city near the center of the shopping area. The store's annual sales amounted to about \$4,125,000; of these, 65% were made on credit, 34% were made for cash, and 1% were made for collection on delivery. The store delivered about 75% of its total sales. The average annual gross margin which it obtained was about 32% of net sales, and the total expenses were approximately 29% of net sales.

¹ Fictitious name used for purpose of disguise.

The department stores had formed the Rand Association in order to obtain the services of skilled buyers, to secure price concessions from manufacturers, and to enjoy any prestige accruing from the national advertising of the association. The association began by purchasing dresses for sale in the member stores under the trade name of Rosetta Rand. Dresses under this trade name were advertised in a women's fashion magazine of national circulation.

The stores which were members of the association were of two classes, *A* and *B*. Each of the class *A* stores, when admitted to the association, purchased one share of stock for \$1,000. The 15 directors of the association were elected by these members from among their official representatives, each store casting one vote. All policies of the association were decided by the 15 directors elected by the voting stores. Class *A* members also had the right to have the names of their stores published in connection with all the advertising done by the association, in addition to the privilege of buying through the association. The class *B* stores did not own stock in the association and, therefore, did not have the right to vote. Stores of this class had the privilege of buying through the association, but their names did not appear in connection with its national advertising. They were required to deposit \$500 with the association when they were admitted to membership. A store in either class could withdraw from the association at any time upon giving 30 days' notice. Upon withdrawal, the original stock subscription or deposit was recoverable. The home office of the Rand Association was in New York City, which was the central market for women's style clothing in the United States.

In May, 1925, dresses to be sold under the Rosetta Rand brand were selected in general as follows:

Each month the management of the Rand Association canvassed the market for popular-price dresses and selected from 100 to 150. Ordinarily, the dresses selected had been offered as part of a manufacturer's line to retail at from \$45 to \$50 apiece, or, if newly made, were to have been added to the manufacturer's line to retail at that price. On the second Thursday of every month, the buyers of the dress departments and some of the merchandise managers from the member stores met in the home office of the association and reviewed the selections as exhibited

by models hired for the occasion. When the dresses were displayed, they were designated only by numbers, so that no one except the association buyer who had selected them in the first place knew what companies had manufactured them. The representatives from the stores cast favorable votes for all dresses which appeared to them to merit further consideration.

This preliminary inspection usually lasted until one or two o'clock. A recess then was called for about an hour. During this time, a committee of buyers, called the fashion committee, counted the votes for each dress. Unless a dress received favorable votes from 75% of the buyers and merchandise managers present at the exhibition, it was not considered further. After the votes were counted, the fashion committee again inspected the dresses which had received the necessary number of votes and selected the three which it thought would be the best selling numbers and which it considered would appear to the best advantage in the national advertising of the association. These three dresses were called "the feature numbers." Each member of the association was required to buy at least six of each feature number but was permitted to select the sizes desired. The other dresses which obtained the required number of votes were called "selected numbers." The association made no stipulation as to the number of these dresses which buyers were to purchase.

Orders were written out by the various buyers on Rand Association order blanks and were left at the central office. Likewise, all reorders were placed with the central office and not direct with the manufacturers.

Each member store agreed to keep the Rosetta Rand dresses on sale in its dress department at the regular price of \$40 each for at least one month after receiving them. Then, if the store management wished to do so, it could mark the dresses down after removing the Rosetta Rand label.

Each member store paid the Rand Association a small percentage of the value of its purchases through the association. This percentage was graduated according to the total purchases of the association in a year. That is, since the ratio of the overhead expenses of the association to its purchases became smaller as the purchases increased, the larger the total purchases were, the smaller was the percentage charged to the stores. Each member store also paid a small percentage of the cost of the

national advertising. This cost was prorated to the stores in proportion to the amounts of their purchases through the association. During the latter months of 1924 and the first part of 1925, these combined percentages for the Hatch Company amounted to about $4\frac{1}{2}\%$ of the total net sales of its purchases through the association.

Under this method of buying, the sources for dresses were canvassed continually by skilled buyers who did not have to divide their attention between the work of selecting merchandise and the actual details of department store operation, as did most buyers for department stores. The buyers for the dress departments of the member stores also kept in contact with the dress market through the purchases which they made outside the association; thus the likelihood was reduced that any desirable lines of merchandise would be overlooked.

The method used in selecting the dresses to be featured was based on the theory that the consensus of opinion of a group of individuals usually was a safer guide than were the independent opinions of most of the members of the group. The system used by the association was designed to protect the stores against the mistakes of individual buyers. It was useful in preventing the selection of mediocre and poor merchandise rather than in insuring the selection of only the best merchandise. In some cases, the merchandise selected might not be so satisfactory as that which the most skilled buyers would have selected, but on the average it was thought to be better than the selections which an individual store buyer would have made.

Because of the large volume of orders which it received for a single style number, the association commonly secured price concessions sufficient to enable member stores to sell for \$40 dresses which ordinarily would sell at from \$45 to \$50.

Rosetta Rand dresses at \$40 were not intended to be the most exclusive styles or the newest fashions in dresses. They were what the treasurer of the Hatch Company called "sublimated mediocrity," or the upper strata of the popular-price classification. The treasurer of the Hatch Company believed that although there was a lag in the progress of exclusive styles from New York westward, this lag was not appreciable in the case of popular-price style merchandise, because of the rapidity and thoroughness with which the newest styles were broadcast by

the fashion magazines and style services with offices in New York. Thus, although an exclusive style might appear in New York two weeks or more before it appeared in Chicago, by the time it had reached the popular-price class in New York, the popular-price stores in the West also were aware of the trend.

The buyer and assistant buyers for the dress department of the Hatch Company complained to the treasurer that the sale of Rosetta Rand dresses at \$40 decreased substantially the department's sales of dresses priced at from \$45 to \$50. They also contended that the policy of purchasing through the Rand Association decreased the importance of their work in the store and did not allow them sufficient opportunity to use their judgment for the good of the department. Up to the time when the store was asked to cast its vote on a further expansion of the activities of the Rand Association, the treasurer of the Hatch Company had not been able to obtain the wholehearted cooperation of the dress department buyer and his assistants in the group purchasing plan.

Some manufacturers of dresses were unable to sell to the Rand Association because they had granted exclusive agencies on some of their lines of dresses to other stores located in one or more of the cities in which members of the association were situated. On account of their agreements with their exclusive agencies, which prevented them from selling the same merchandise to other stores in the same cities, these manufacturers could not sell to the Rand Association if there was a member store in the city of any of their exclusive agents.

The average initial mark-up in the dress department of the Hatch Company during the spring season of 1925 up to May 1 on dresses other than the Rosetta Rand brand was about 40% of net sales with a net maintained mark-up of about 35% of net sales. The total expenses of the dress department were about 29% of net sales. The original mark-up obtained on Rosetta Rand dresses was about 34.3% of net sales, out of which 4.5% of net sales had to be paid to the association. The mark-downs on Rosetta Rand dresses for both the fall season of 1924 and the spring season of 1925, up to May 1, had been less than 1% of net sales. The experience of the Hatch Company in its purchases and sales of Rosetta Rand dresses for part of the fall

season of 1924 and for the spring season of 1925 up to May 1 is summarized in Exhibit 1.

EXHIBIT 1

THE HATCH COMPANY'S STOCKS, RECEIPTS, SALES, AND MARK-DOWNS FOR ROSETTA RAND DRESSES, SEPTEMBER, 1924, TO MAY, 1925

Year	Dresses on Hand (in pieces)	Dresses Received (in pieces)	Dresses Sold (in pieces)	Mark-Downs (in dollars)
1924				
Sept.	...	38	5	...
Oct.	33	200	105	...
Nov.	128	120	106	...
Dec.	142	103	117	8.00
1925				
Jan.	128	111	150	113.25
Feb.	89	110	59	...
Mar.	140	133	96	...
Apr.	177	146	87	169.50
May 1	236	...	...	...

Several members of the board of directors of the Rand Association had recommended during April, 1925, that the association widen the scope of its buying activities to include a line of millinery to be sold at a price between \$11 and \$13.50 and a line of dresses to be sold at a price of \$62. All such merchandise purchased through the association was to be given the Rosetta Rand brand and was to be included in the national advertising of the association.

The annual net sales of the millinery department of the Hatch Company amounted to about \$172,000 and those of the dress department to about \$365,000.

The Hatch Company voted for the extension of the group buying of the association to millinery and recommended a price of \$13.50. The board of directors of the association, after receiving the votes of all the members, decided to purchase millinery to be retailed at \$11.

The Hatch Company voted against the immediate inclusion of \$62 dresses in the Rosetta Rand line. The management of the Hatch Company considered that the association should pur-

chase all suitable types of medium-price merchandise before becoming involved in the problems attendant on the sale of merchandise in the higher-price lines.

COMMENTARY: This case raises the specific issues of whether the department store should have favored the extension of cooperative, or group, purchasing to include medium-price millinery, and whether it should have favored the extension of such purchasing to include high-price dresses. In the background is the general question of whether cooperative buying is a desirable policy for a department store to follow.

To take up the general issue first, it may be pointed out that a department store with the volume of business of the Hatch Company may expect to secure some price concessions through cooperative buying. Although the purchasing power of such a department store in the aggregate is fairly great, when this purchasing power is distributed over a large number of selling departments, it is not effectively greater than the purchasing power of many small unit stores. A combination of 25 department stores, however, permits an effective use of large purchasing power for particular departments. When dealing with such a combination, a manufacturer frequently can quote lower prices because the sale of all or a considerable part of his output is assured for a given length of time.

Cooperative buying also brings to bear the judgment of the merchandise managers and buyers of a number of different stores and likewise permits the utilization of a specialized buying organization. In this connection it may be pointed out that cooperative buying, as described in this case, really is cooperative merchandising and is to be distinguished from consolidated buying. Under the cooperative merchandising plan, the merchandise managers and buyers have a voice in the selection of merchandise. It is not forced on them without consultation of their wishes, as frequently may be the case under a plan of consolidated buying.

Another possible advantage derived from the plan of group purchasing described in this case is the tie-in with the national advertising of the cooperative buying association. This is a factor of doubtful weight, however, since the most that can be hoped for from such national advertising of shopping goods is the development of an attitude of consumer recognition, not one of consumer preference or of consumer insistence.² Furthermore, it is not likely that a store can appreciably

² Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 101, 102, 261-264.

decrease the volume of its own advertising as a result of the national advertising of the cooperative buying association.

In favor of the plan of group purchasing it may be urged that the Hatch Company had experienced a favorable rate of stock-turn on the dresses bought in this way. As shown by Exhibit 1 the rate of stock-turn on Rosetta Rand dresses for the last 4 months of the fall season of 1924 was approximately 3.3 times, and for the first 4 months of the spring season of 1925 it was approximately 3 times. In spite of this favorable showing as respects the rate of stock-turn, it is to be borne in mind that cooperative purchasing frequently involves the risk that a store may be tempted by an advantageous purchase price to expand its stocks beyond normal requirements.

There are certain general considerations that weigh against the application of the cooperative or group purchasing plan to the department store field. Shopping goods, which are the mainstay of the department store business, are not staple in character; and the requirements of particular localities and of individual stores differ to such an extent that the independent judgment of individual department managers usually has been considered indispensable in the purchase of merchandise to be sold in department stores. Under the group purchase plan, even though all buyers concerned have a voice in the matter, there is likely in some instances to be a small minority who will accept merchandise against their own better judgment because of their reluctance to dissent from what appears as the majority opinion, and thus, perhaps, to stand in the way of an advantageous purchase. If any buyers in the group are not completely convinced of the merits of the merchandise purchased, it is reasonable to expect that such merchandise will not sell readily in their departments.

There is also the general consideration that numerous buyers believe that the importance of their positions is diminished through the operation of the group purchase plan. Such a feeling on their part is inevitable, since, if cooperative buying in all lines should become a common practice for department stores, the existing forms of department store organization would doubtless be altered substantially. Hence, cooperative buying cannot be expected to command the whole-hearted support of individual buyers under the existing form of department store organization.

Other disadvantages of group buying pointed out in the statement of the case include the danger of conflict of cooperatively purchased goods with other lines carried, difficulties encountered in case of manufacturers granting exclusive agencies, the restrictions placed on freedom of making price changes, and the danger that the selling appeal for cooperatively purchased merchandise will be placed primarily on a

price basis, to the possible detriment of any prestige which the store wishes to acquire on the basis of quality of merchandise and service.

In this particular case it is noted that the original mark-up on the cooperatively purchased dresses was only 34.3% of net sales, as compared with an original mark-up of 40% of sales on other goods in the dress department. Evidently the benefit of the price concession secured from manufacturers was being passed on in considerable part to consumers. It is also to be noted, however, that mark-downs on the cooperatively purchased dresses averaged only about 1% of net sales. Out of the mark-up of 34.3%, 4.5% of net sales was paid to the cooperative buying association to cover the expenses of buying and of national advertising.³ In the case of merchandise purchased under the cooperative plan described, it does not appear that the publicity and buying expense figures for this store would be appreciably reduced. Consequently, the amount of 4.5% of the net sales of the cooperatively purchased merchandise was in substantial part superimposed on the existing expense ratio of the store. From the net profit standpoint, therefore, it appears that the volume of cooperative purchases necessarily must be large in order to cut down proportionately the expense of the cooperative buying association.

The main argument against cooperative buying for department stores, however, is the difficulty of applying standardization to style merchandise in the shopping goods class. Desire for distinctiveness is a sufficiently important buying motive to make it doubtful whether large-scale cooperative purchasing can be applied to a wide range of the goods sold in department stores. On the other hand, it should be pointed out that after a style has become popular the dominant buying motive is emulation, and it is evidently this stage in the style cycle at which the cooperative purchasing plan for medium-price dresses is aimed. Owing to the rapidity of progress of the style cycle from one section of the country to another, it is expected that a particular style which has reached the emulation stage will be popular in several different parts of the country at the same time. This very rapidity of progress in the style cycle, however, is in itself an adverse factor, since styles swiftly kill themselves by their own popularity.⁴ Purchases under the cooperative plan in sufficient volume to secure any real benefits, there-

³ According to common figures published by the Harvard Bureau of Business Research on the operating expenses of department stores with sales over \$1,000,000 in 1924, the typical figure for buying expense, including the receiving, marking, and stock-room wages, was 3.3% of net sales. Also, the typical figure for publicity expense for stores of this size was 4.3% of net sales. See Bureau of Business Research, Harvard University, *Bulletin No. 53, Operating Expenses in Department Stores in 1924*, p. 58.

⁴ See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 163-167.

fore, might involve an element of risk on account of style obsolescence.

The conclusion on the general issue, then, is that cooperative buying still is in the experimental stage. The experiment, nevertheless, appears to be worth trying, and medium-price dresses represent the class of shopping goods with which there is the greatest chance of success under the cooperative buying plan.

On the specific issue of whether the Hatch Company should have favored the extension of the cooperative purchasing plan to medium-price millinery, the decision reached does not appear to be sound. In the selection of hats, desire for distinctiveness is likely to be a stronger buying motive than emulation. Furthermore, with the advent of low-price, machine-made hats, the style cycle in this type of millinery appears to have been greatly accelerated. These two factors, viewed in the light of the foregoing discussion, make the store's decision on this issue seem of doubtful wisdom.

In the case of high-price dresses, the management of the Hatch Company clearly followed a sound policy in voting not to extend the cooperative buying plan to garments of this type. Here, again, desire for distinctiveness is likely to be a stronger buying motive than emulation, and the price appeal is less effective.

The general conclusion indicated by this case is that there is only a limited field of usefulness for the cooperative plan of purchasing as applied to style merchandise sold in department stores.

October, 1925

M. P. M.

NORLIN COMPANY¹

DEPARTMENT STORE—SILK UNDERWEAR

DUPLICATION OF STOCKS—*Identical Merchandise Sold in Two Departments.*

In this company's store, silk bloomers were sold both in the petticoat department, on the third floor, and in the women's and misses' silk underwear department on the first floor. Bloomers had been placed in stock in the petticoat department because of a decline in demand for petticoats. The management decided to permit this duplication of merchandise stocks to continue, considering that some interdepartmental competition was desirable and believing that the duplication of stocks in this case tended to increase sales, inasmuch as silk bloomers were thought to be purchased frequently on impulse.

LAYOUT—*Relation of to Duplication of Merchandise in Different Departments.* In this company's store, the petticoat department was situated on the third floor and the women's and misses' silk underwear depart-

¹ Fictitious name used for purpose of disguise.

ment was situated on the first floor. When the demand for petticoats declined, silk bloomers were placed in stock by the petticoat department. Since the two departments were located on different floors, this duplication of merchandise stocks was not considered undesirable.

(1924)

During several years prior to 1924 the demand for women's petticoats had decreased and the demand for women's bloomers had increased. As a result of this change in style, the petticoat department of the Norlin Company, in order to maintain its sales volume, stocked bloomers as well as petticoats. The proportion of sales of bloomers to total sales of the department was increasing gradually. The women's and misses' silk underwear department of the store also sold bloomers. In 1924 the question was raised as to whether this duplication of merchandise in the store should be allowed to continue.

The department store of the Norlin Company sold men's, women's, and children's wearing apparel, house furnishings, furniture, rugs, tobacco, groceries, trunks, and jewelry. The store was located within the shopping area of a large city. The annual net sales of the store were approximately \$16,500,000.

The women's and misses' silk underwear department was located on the center aisle of the main floor, one of the heavy-traffic points in the store. The store executives believed that this location was suitable, because customers frequently purchased underwear on impulse when they saw an attractive display. The annual net sales of this department, as shown in Exhibit 1, were approximately \$300,000.

The average stock on hand in the women's and misses' silk underwear department during the spring season of 1924, February

EXHIBIT 1

NET SALES OF WOMEN'S AND MISSES' SILK UNDERWEAR DEPARTMENT OF NORLIN COMPANY

Season		Net Sales
Spring—February through July	1922	\$124,455
Fall—August through January	1922	165,237
Spring	1923	133,350
Fall	1923	171,255
Spring	1924	144,085

to July inclusive, was \$42,800. The stock-turn in this department averaged about 6.7 times per year. During the spring season of 1924, the average original mark-up was 29.5% of net sales and the average maintained mark-up 26.8% of net sales. After the addition of the discounts obtained, the gross margin of the department during that season was 28.5% of net sales; expenses were 24.9% of net sales.

The petticoat department was located on the third floor, in proximity to such departments as women's and misses' coats, suits, dresses, hats, corsets, and fancy silk underwear. The merchandise manager believed that this location was favorable to sales of bloomers and petticoats. Customers purchasing merchandise in the other departments on the third floor were attracted by the displays in the petticoat department. The annual net sales of the petticoat department, as shown in Exhibit 2, were about \$110,000.

EXHIBIT 2

NET SALES OF PETTICOAT DEPARTMENT OF NORLIN COMPANY

Season		Net Sales
Spring—February through July	1922	\$52,159
Fall—August through January	1922	68,889
Spring	1923	48,796
Fall	1923	60,775
Spring	1924	47,191

The average stock of this department in the spring season of 1924, February to July inclusive, was \$10,900. The average stock-turn in the department was 9.1 times per year. The average original mark-up was 21.5% of net sales, with an average maintained mark-up of 19.2% of net sales. After the addition of the discounts obtained and adjustments of minor items, the gross margin for the department for that season was 26.8% of net sales. The expenses for the same period were 25.5% of net sales.

The buyers for the petticoat department and the silk underwear department purchased stocks of bloomers independently of each other. Neither buyer was required to consult the other in regard to sources from which to purchase.

The women's and misses' silk underwear department maintained a larger stock of bloomers than did the petticoat depart-

ment. Both these departments, however, sold bloomers made of rayon, glove silk, and silk. The most popular selling price in each line was: rayon, \$1.50; glove silk, \$2.75; and silk, \$3.75. The silk underwear department stocked both untrimmed and trimmed bloomers, chiefly in flesh color and white. The petticoat department sold some bloomers in darker colors, but most of its stock was a duplication of that in the silk underwear department on the first floor. The women's and misses' fancy underwear department, located on the third floor, also sold bloomers, but these were made of crepe de chine and were not an exact duplication of the merchandise carried in the other two departments.

Approximately 80% of the store's sales of bloomers were made during the fall season. The departments did not keep records of sales of bloomers separately from records for other items, but the buyer for the women's and misses' silk underwear department estimated that sales of bloomers comprised about 40% of the total fall sales and 15% of the total spring sales in that department. The average stock of bloomers on hand in the department during the fall was about \$7,500. The buyer for the petticoat department estimated that approximately 60% of the fall sales and 20% of the spring sales in his department were of bloomers, and that the average stock of these goods on hand during the fall was \$3,000. The buyers estimated that a stock-turn of at least 6 times per year was obtained on the bloomers in each department.

The Norlin Company displayed timely merchandise on selling tables placed in the aisles of the main floor. Merchandise on these tables ordinarily was priced at its full mark-up. Both the petticoat department and the women's and misses' silk underwear department were allowed to use some of these tables, but not on the same days. Usually each of these departments used one or two tables two days each week during the fall. Both departments attempted to secure the use of the tables during cold waves of the fall season, when the demand for bloomers was heaviest. The merchandise manager estimated that a department, on a good sales day, could increase its sales of bloomers from \$100 to \$450 by using the aisle tables. He believed that this was the result of the drawing power of the groups of customers which gathered around these tables.

Because the rate of stock-turn for silk bloomers was rapid, the merchandise manager did not believe that the duplication of stocks was undesirable. There was, of course, the possibility that the departments would sell merchandise of the same quality at different prices, or give different values in merchandise for the same price. It was expected, however, that the operation of the comparison department of the store would guard against such contingencies. Another difficulty was that customers frequently returned merchandise to the wrong department. This situation caused extra work for the sales clerks and inconvenienced the customers.

The merchandise manager believed that a moderate amount of competition between departments was desirable, even though it always was possible that competition between departments selling comparable merchandise would become keen enough to cause friction among the department buyers and their assistants.

The management of the Norlin Company decided to allow both the women's and misses' silk underwear department and the petticoat department to continue to sell bloomers.

COMMENTARY: The specific issue in this case is whether two different departments of a department store should be permitted to offer identical merchandise for sale. Underlying this specific issue is the general question of the considerations which govern department-store layout.

It was argued in the case that a moderate degree of interdepartmental competition might be desirable, presumably in stimulating the efforts of department managers and salespeople. But benefits of this nature appear to be rather intangible and it was admitted that such rivalry if carried too far might result in friction. The following adverse factors also should be noted: (1) increased investment in merchandise stocks; (2) duplication of sales effort; (3) duplication of purchasing and control work; (4) possible lack of uniformity in price or quality between the two departments; (5) possible confusion in minds of customers; and (6) confusion in returned merchandise.

It is apparent that the argument in favor of permitting duplication to continue rested primarily on the assumption that considerably increased sales volume resulted from this situation. Since the petticoat department originally placed silk bloomers in stock because of the decline in demand for petticoats, it also may be urged that it was desirable to sell bloomers in the petticoat department in order to keep up volume of sales and maintain the organization of that department

until such time as changes in fashion brought petticoats once more into favor. It may be pointed out, however, that this argument would be lessened greatly in weight if the layout of the store had been such that these two departments were located in close proximity.

The broad general principle governing the classification of merchandise into departments and the location of departments within a store may be stated as follows: the merchandise in each department should be homogeneous in character, and departments selling related merchandise should be situated in proximity.

This general principle requires some qualification. Aside from limitations arising from the physical characteristics of the space available, there are a number of other considerations, the most important of which may be noted briefly.

In department stores, certain departments, primarily those handling shopping or specialty goods where the unit of sale is fairly large, may be expected to draw patronage on their own account. Other departments, such as those handling small wares, are dependent for their patronage on customers who are attracted to the store primarily on account of the former group of departments. Goods in these "dependent" departments frequently are called "impulse" merchandise, since purchase commonly is made on the spur of the moment because the article happens to be seen by the customer. It is common for departments carrying goods of this type to be located on the first floor of the department stores.

Also, with high urban rental values and increases in the volume of sales in department stores, the problem of handling customer traffic has become serious. Traffic considerations consequently may be a factor of importance in determining the location of a particular department. For instance, considerations related to the handling of traffic dictate that departments on the first floor shall be mainly those in which sales transactions can be consummated quickly; otherwise serious congestion is inevitable.

Again, the different buying habits of men and women may be an important consideration in determining the location of departments. In purchasing at department stores, men commonly do not wish to be thrown into close contact with crowds of women shoppers.

Another consideration affecting department-store layout is the convenience of customers and their natural expectations with regard to the location of various departments. In this connection, it is to be borne in mind that convenience to all customers of the store must be considered, not merely convenience to customers of any particular department. Also, with the large number of different selling departments in a modern department store, it cannot be expected that customers will

remember clearly the layout and location of the various departments.

After review of the principal consideration affecting department-store layout, it may be questioned whether in the particular case of the Norlin Company such departments as petticoats and silk underwear were not closely enough related to render it inadvisable for them to be located on separate floors. If these two departments had been situated in proximity, it appears that there would have been no justification for the duplication of merchandise. The duplication does not appear to have been based on any differences in buying habits,² nor is the case parallel to a situation where duplicate merchandise may be carried in two or more small-wares departments on the first floor in order to secure a better distribution of customer traffic.

Thus the justification of permitting continued duplication of merchandise between the petticoat and silk underwear departments in this case must rest primarily on the theory of "impulse" merchandise. This theory, however, is susceptible of application to so many different kinds of merchandise that it would be impossible to include them all on the first floor of a department store. With the petticoat department on the third floor, the decision to permit continued duplication of merchandise may be justified on the grounds of expediency. It is doubtful, however, if this case exemplifies the best application of the principles of department-store layout.

October, 1925

M. P. M.

² A Boston department store, having purchased an adjacent men's clothing store, maintained two men's furnishings departments, one in the newly acquired men's store and the other in its original store, in order to take advantage of the fact that women frequently purchased men's furnishings. See Copeland, M. T., *Problems in Marketing*, A. W. Shaw Company, Chicago, Second Edition, 1923, case of the Jordan Marsh Company, p. 57.

FLAGG COMPANY¹

CHAIN STORES—DRY-GOODS

SHOPPING GOODS—*Sold in Convenience-Goods Store.* A company operating a chain of seven dry-goods stores in towns and small cities carried women's street dresses only in those stores located in shopping centers. In 1921 the general manager decided to stock such dresses in a store located in a neighborhood center. By 1923, sales of the dresses were 8% of that store's annual sales. In that store a small profit was realized on the dresses, because the company could dispose of surplus stocks through its stores in shopping centers.

(1921)

¹ Fictitious name used for purpose of disguise.

The Flagg Company, with annual sales of \$1,000,000, operated a chain of seven dry-goods stores in the towns and small cities of an eastern state. All merchandise was bought by the central office and shipped direct from the manufacturers to the various stores. Although the store managers fixed the retail prices of merchandise in their stores, the general manager of the chain determined what merchandise was to be stocked in each store.

In 1921 the general manager of the chain contemplated stocking women's and misses' street dresses in the Kirk² store, one of the chain stores, which was located in a neighborhood center, a 10-minute ride from the retail district of a large city. At that time only the Flagg stores located in shopping centers sold women's street dresses.

The annual sales of the Kirk store were approximately \$41,000. The store sold hosiery, small wares, toilet goods, ribbons and laces, millinery, ladies' cotton and silk underwear, sweaters, petticoats, house dresses, and men's furnishings. Deliveries were made when requested by customers. Approximately 2% of the sales were to charge customers.

The growth of the neighborhood stores of the Flagg Company had been in convenience merchandise, such as the Kirk store sold. The general manager of the chain, however, was of the opinion that if a street-dress department were added to the Kirk store, larger sales could be made, and, at the same time, prestige would be added to the store.

The space required by the new department would be small, since only a few street dresses were to be stocked. The space used by some other departments, such as the small-wares department, could be curtailed to make room for the street dresses.

For its stores located in shopping centers, the Flagg Company purchased street dresses in lots through a buying organization of which it was a member. Purchases were based on samples shown to the Flagg Company's buyers in New York by the buying organization. Seven per cent of the purchase price was charged by the organization for its services. Whenever a large lot of women's and misses' dresses was acquired through the organization, a small number could be sent to the Kirk store. The dresses sent were to be purchased for the current season, and

² Fictitious name used for purpose of disguise.

the appeal was to be to the regular customers rather than to bargain hunters. On cotton dresses, the retail prices were to range from \$7.95 to \$15, and on silk dresses from \$17.95 to \$30. It was believed that losses could be avoided, because if all the dresses stocked in the Kirk store were not sold, the surplus could be shipped to other stores in the chain more advantageously located for the sale of such merchandise.

The general manager of the Flagg Company decided to sell women's and misses' street dresses in the Kirk store, introducing them in 1921. By the end of 1923, sales of these dresses had amounted to approximately 8% of the total sales of the store. An executive of the Flagg Company stated that while the Kirk store alone could not sell street dresses profitably, the company realized a small profit as a result of being able to dispose of that store's surplus stock through other stores of the chain located in shopping centers. The manager of the Kirk store approved the policy of selling street dresses in her store.

COMMENTARY: This case raises the question of whether a "neighborhood store" should attempt to sell women's dresses which are bought by consumers on the basis of comparison of values at the time of purchase.³

The Kirk store operated by the Flagg Company was primarily a convenience-goods store and its success depended upon carrying items of such nature that they were purchased frequently, and that convenience of purchase was an important attraction to customers.

In general, shopping goods are not suited to "convenience" locations, first because there cannot be enough variety for a proper comparison of value within the single store and, even more important, because there are not enough competing stores in the district carrying this type of merchandise to make possible an interstore comparison of value.

It appears that the Flagg Company was able to sell low-price house dresses successfully. The question may be raised here, then, as to the effect which price and style have in determining the type of merchandise to be carried in a store. It is believed that there are various grades of shopping appeal and that when style and price are not important factors, it is possible for a single store to have a wide enough variety to furnish customers a basis of comparison at the time of purchase. Under such circumstances, the sale of shopping goods in a "neighborhood store" may be successful.

³ See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, chap. iii, especially pp. 67-89, inclusive.

With shopping goods of a higher grade, however, for which style and price are important factors, the opportunity for interstore comparison becomes necessary. In a contemplated purchase where the unit price is large, for instance, comparison of values becomes increasingly important to the customer and more consideration is given to the purchase. It is impossible, therefore, for a store outside the "shopping" district to sell such items in quantity.

Since as a rule shopping goods are not suited to convenience store locations, the Flagg Company should not have attempted to sell women's street dresses in the Kirk store.

October, 1925

D. K. D.

MORKEN DEPARTMENT STORE¹

DEPARTMENT STORE—GROCERIES

UNPROFITABLE DEPARTMENT—*Continuation for Purpose of Attracting Customers.* A department store selling a wide variety of medium-price merchandise sold popular-price dry groceries. Because of competition with unit and chain grocery stores in the residential districts and because of high expenses for handling and delivery, the grocery department was being operated at a loss. The store owners decided to continue the department, however, because they believed that it attracted customers to the store and that it could be operated profitably by improved merchandising methods.

GRADE OF MERCHANDISE—*Changed to Eliminate Competition.* A department store selling medium-price merchandise was operating its grocery department at a loss, because of competition with unit and chain grocery stores in the residential districts and because of high expenses for handling and delivery. The store decided to replace its popular-price groceries with fancy grades of high quality, in order to eliminate the competition of unit and chain stores and to attract new customers.

(1924)

For the spring season of 1924, the grocery department of the Morken Department Store showed a net loss of 14.7% of net sales. The general manager of the store wished to discontinue the department, but the owners did not agree with him.

The Morken Department Store was located near the center of the retail district of Chicago and sold a wide variety of medium-price merchandise. The annual net sales were about \$39,000,000, of which 17% were made on a c.o.d. basis.

¹ Fictitious name used for purpose of disguise.

The grocery department occupied about one-fifth of the selling space on the fourth floor. The department was located near the back of the floor, behind such departments as men's clothing and shoes, tobacco, and radio equipment, which occupied the front two-thirds of the floor. Behind the grocery department were the bakery and delicatessen departments, and behind those a packing room and space for special reserve stock for the food departments. There were three banks of elevators in the store, with five elevators in each bank. The bank of elevators nearest the rear of the store opened directly into the grocery department.

The grocery department sold only dry groceries. Sales were somewhat larger in the spring and fall than they were in the summer and winter. Net sales for the department in the spring season of 1924 were \$403,014, a decrease of \$66,488 from sales in the spring season of 1923. Individual sales in the department averaged \$2.24. The average original mark-up for the department in the spring season of 1924 was 26.5% of its net sales. After the addition of discounts on purchases and the deduction of depreciation, shrinkage, and mark-downs on stock, however, the maintained gross margin for the department was 24.5% of net sales. In the spring season of 1924, the stock-turn in the grocery department was 2.7, as compared with 2.3 for the store as a whole.

In order to obtain quantity discounts, the company purchased 15% of its stock for the grocery department in large lots. These quantity purchases consisted chiefly of canned goods, which the company usually bought during the canning season. A large proportion of the purchases for the department the company made directly from the manufacturers.

Expenses for the grocery department were high because of the bulkiness and weight of the merchandise sold. The department required a larger storage space and more inside delivery trucks for the movement of merchandise within the store than most of the other departments required. Extra non-selling employees also were needed to move the heavy merchandise for the sales clerks and to keep the stocks on the selling floor filled from the reserve stocks. The salaries for the sales force for the grocery department were 7.2% of its net sales, as compared with a ratio of 5.5% for the entire store. The total expenses of the department were 39.2% of its net sales, and the total expenses of the store as a whole, 30.7% of total net sales.

The gradual movement of the residential sections away from the shopping districts increased the competition between the grocery department of the Morken Department Store and the chain and unit stores in the residential districts. As a rule, these so-called neighborhood stores did not deliver merchandise. The Morken Department Store, however, had to deliver its groceries, because of the store's location. When customers were shopping, they did not want to carry bulky, heavy packages of merchandise. The delivery expenses for the grocery department for the spring season of 1924 were 7.3% of net sales, and for the store as a whole, 3.3% of net sales.

In accordance with the delivery system of the store, the delivery men loaded packages in the order in which it would be most convenient to deliver them. In this way, heavy grocery packages frequently were placed on top of, or next to, easily injured merchandise, such as hats, lamp shades, light furniture, or glassware. The loss from breakage in delivery was not measured, but the general manager believed that it was large.

The Morken Department Store had held special cut-price sales in the grocery department but had discontinued this policy in an effort to make the department profitable. The department had begun to stock the best quality of fancy merchandise instead of the popular-price groceries previously sold. The store executives hoped that this change of goods would attract not only the store's existing customers, but also new customers who demanded only the best grade of fancy groceries. In this way, the executives endeavored to eliminate competition with the chain and unit grocery stores.

The advertising expense of the grocery department had increased from 2.3% of net sales for the spring season of 1923 to 3.5% of net sales for the spring season of 1924. The average advertising expense for the store as a whole for the spring season of 1924 was 2.7% of total net sales.

The owners of the store wished to continue the grocery department because they believed that it attracted customers who otherwise would not come to the store, and because they believed that the department could be operated profitably by improved methods of merchandising. Although the general manager continued to disapprove of the operation of the grocery department, it was not discontinued.

COMMENTARY: Most department stores have at one time or another operated grocery departments. This may be an outgrowth of the fact that in all general merchandise stores grocery departments furnish a substantial percentage of the stores' total sales volume and that many department stores do not recognize the difference between the shopping appeal to customers in the present-day department store and the convenience appeal in the older type of general merchandise stores. Most metropolitan department stores have discontinued selling groceries, for they have discovered that they cannot make those departments yield a profit.

The Morken Department Store was primarily an establishment for the sale of "shopping goods,"² that is, goods for which the primary consumers' buying motives are based on a wide variety of selection which makes possible a comparison of values at the time the customer purchases.

With groceries, on the other hand, the primary appeal to customers is not comparison of values and variety, but rather the convenience of purchase. This is especially true with standardized bulk and package groceries, often referred to as "staple groceries." It is for this reason that the "neighborhood stores" and "chain stores" have developed so extensively in the grocery field. Customers given approximately the same values as to price, service, and merchandise will buy from the store most convenient to their homes.

It should not be inferred from this that department stores do not and cannot sell any type of convenience goods. In every department store there are large notion, toilet, and drug departments. These, too, are convenience items. A distinction must be drawn, therefore, between convenience goods which are purchased where the primary appeal is accessibility to the home and convenience goods which are purchased through mass accessibility. Notions and toilet articles in department stores are clearly of the second type, while groceries, which form a much larger bulk, fall into the first class.

Department stores are organized, conducted, and located to sell large quantities of merchandise of a type in the sale of which comparison of value is a primary factor. They maintain elaborate advertising departments, comparison departments, and buying organizations to make sure that the values which they have to sell are comparable. They are "geared" to this type of merchandising, with the result that their costs are greater than the more simply run organizations which sell convenience goods.

This point is best illustrated by a comparison of percentages of the

² Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 67-70.

operating expenses of the grocery department in the Morken Department Store for the spring season of 1924, with the average expenses of 545 retail grocery stores for the year 1924,³ as shown in Exhibit 1.

EXHIBIT 1

OPERATING EXPENSES OF GROCERY DEPARTMENT IN MORKEN
DEPARTMENT STORE COMPARED WITH COMPOSITE
EXPENSES OF UNIT GROCERY STORES

(*Net Sales = 100%*)

	Grocery Dep't of Morken Dep't Store	Modal Average of 545 Grocery Stores	ACCORDING TO VOLUME	ACCORDING TO RATE OF STOCK- TURN
			Stores with Sales of \$250,000 or Over—44 Stores Reporting	Stores with Stock-turn Less than 7 Times—125 Stores Reporting
Gross Margin	24.5%	19.8%	19.3%	20.3%
Total Expense	39.2	18.0	17.6	19.7
Net Profit (or Loss)	14.7 Loss	1.8	1.7	0.6
Stock-turn	2.7 times	10 times	12.1 times	5.3 times

While the Morken Department Store received a higher percentage of gross margin than the unit stores, its percentage of expenses was over twice that of the typical grocery store. Because of its large inventory in relation to sales, its stock-turn was very much smaller than secured by the typical grocery store.

The question then narrows itself to a consideration, first, of whether the expenses of this department could have been reduced, and second, if they could not, of whether the department should have been discontinued. As to the first point, an analysis of individual items of expense, such as delivery, advertising, and direct selling expenses, leads to the belief that they could not be reduced to any great extent. The difficulty, however, did not come so much with the direct expenses as with the indirect expenses—those fixed charges of rent, heat, taxes, insurance, and a share of the management expenses which a grocery department in a department store must bear. Those indirect expenses are of necessity much higher in department stores than in unit stores.

As to the second point, the Morken Department Store gradually began to stock the best quality of fancy merchandise instead of the popular-price groceries previously sold. That was an effort to change the appeal of the grocery department from a convenience basis to a specialty basis, so that the department would have a "particular attraction for the consumer, other than price, which induces him to put

³ Bureau of Business Research, Harvard University, *Bulletin No. 52, Operating Expenses in Retail Grocery Stores in 1924*, pp. 22, 55, and 56.

forth special effort to visit the store in which they are sold and to make a purchase without shopping.”⁴

The question then arises as to whether department stores are any better suited to sell specialty goods than they are to sell convenience goods, and whether groceries can be given this specialty appeal. Department stores do attempt to create a specialty appeal with some of their higher quality shopping items. Few department stores have succeeded in establishing a reputation which allows them to do this in all lines. While certain types of groceries can be given some basis of specialty appeal, it is not believed that a large enough percentage of the total sales of this department could be made on this basis to make the department pay a profit.

It must be remembered that the department was selling over \$400,000 worth of merchandise a year and making over 180,000 transactions. The management of the Morken Department Store may have thought that it would be worth while to run the grocery department as a “loss leader” rather than to discontinue it, inasmuch as it was bringing many customers into the store. In the past many department stores have operated such “loss” departments under the misconception that a department store to be successful must have merchandise of all kinds in its stocks. Many stores today have found that to attempt this is an unwise policy and have limited the lines they carry. It is believed that the department store of the future will handle only those items which are suited to the consumer appeals which department stores by their very nature are able to make.

The conclusion is that the Morken Department Store should have discontinued its grocery department. The expenses of operation were high, and could not be reduced to the level of those of the competing unit stores. Groceries are convenience goods for which accessibility to the homes of the customers is a primary buying motive. Department stores are mainly shopping-goods stores and find it impossible to compete on a basis of accessibility to the home, even though they are successful in some departments in competing in mass accessibility. There is little likelihood that in this case the grocery department could have been made successful merely by changing the appeal in the department from a convenience to a specialty appeal.

October, 1925

D. K. D.

⁴ Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, p. 103.

MOLLART COMPANY¹

DEPARTMENT STORE—FURNITURE

UNPROFITABLE DEPARTMENT—*Continuation of.* Although the furniture department of a department store had shown an annual net loss for several years, the merchandise council of the store decided to continue the department in operation. The council arrived at this decision in the belief that the more profitable departments in the store could not be expanded to use the space occupied by the furniture department to better advantage than that department could be developed to use it, and in view of the further consideration that the furniture department smoothed out the sales peaks for the store as a whole and bore a substantial amount of the store's overhead.

UNPROFITABLE DEPARTMENT—*Planned Improvement in Buying.* The furniture department operated by a department store had shown an annual net loss for several years. The store believed this was the result of poor buying and employed a new buyer, who planned a net profit of 6% for the department for the following year.

(1925)

During 1924 the furniture department of the Mollart Company showed a loss of 1.5% of its net sales, while the house-furnishings division, which included the furniture department, showed a net profit of 3.4% of its net sales. The merchandise manager in charge of the house-furnishings division was of the opinion that 1924 had been a fairly profitable year for furniture stores. There was some question as to whether it was advisable for the store to continue the furniture department in operation. In any event, the merchandise manager considered it necessary to increase the percentage of profit earned by the house-furnishings department.

The Mollart Company was located on the main shopping thoroughfare of an eastern city. The company sold wearing apparel of all kinds, furniture, rugs, art goods, and phonographs, all of excellent quality. Annual sales amounted to about \$13,000,000. The store building was of modern construction and was attractive in appearance. Its windows always were decorated tastefully. There were two banks of elevators, one in the front and one in the rear of the store.

The furniture department occupied the entire selling space on the top floor of the store building; this area, including aisles,

¹ Fictitious name used for purpose of disguise.

measured 21,000 square feet. Eleven salespersons were employed in the department. The furniture was arranged in attractive displays, including exhibits of model rooms containing furniture appropriate to the current season. A customer could select separate pieces of furniture from the floor or he could purchase, in one order, complete equipment for a room as shown in one of the models. Sales in the department amounted to more than \$700,000 in 1924.

The advertising expenditure of the furniture department was 4.4% of net sales, while that for the store as a whole was 3% of net sales. The advertising copy for this department stressed chiefly the quality of the furniture. Four annual sales were held regularly: one, lasting a month and a half, during January and February; another, lasting a week, in May; another, lasting a month and ten days, in July and August; and another, lasting one week, in September. Special merchandise was purchased for these sales, and the mark-ups on the leading articles of the sale were reduced. Occasionally, when the stock on hand became too old, clearance sales were held, at which prices were reduced.

For several years, the furniture department had shown an annual net loss. The divisional merchandise manager believed that this was caused by poor buying which had resulted in a large stock of unsalable merchandise. Finally, in the fall of 1924, a new buyer was put in charge of the furniture department.

The 1924 profit and loss statements for the furniture department and for the house-furnishings division as a whole are shown on the opposite page. With sales of \$700,268 the furniture department showed a loss of \$10,310; and with total sales of \$2,520,195 the entire division showed a profit of \$85,593.

The merchandise manager of the house-furnishings division did not think that the large percentage, about 21%, which stock on hand in the furniture department bore to annual net sales in that department was unusual for a department of that type. More than 33 $\frac{1}{3}$ % of this stock on hand, however, was more than a year old, and the merchandise manager believed that not over 20% of the stock on hand should be that old. The new buyer hoped to remedy this situation through special price appeals during the usual winter furniture sale. He also planned to improve the advertising copy and to use it especially for seasonable items.

MOLLART COMPANY

PROFIT AND LOSS STATEMENTS, 1924

	Furniture Department	House-Furnishings Division
Stock on Hand, Beginning	\$150,335	\$ 525,174
Purchases	459,843	1,629,735
Sales	700,268	2,520,195
Reductions—Regular	55,487	163,920
Reductions—Discounts	5,924	20,927
Reductions—Samples	.....	8,634
Labor Loss or Gain	13,714*	.....
Inventory Shrinkage	504*	.....
Stock on Hand—Cost—Closing	138,356	479,447
Stock on Hand—Retail—Closing	229,371	787,324
Reserve for Mark-ups	1,511	.....
Total Reductions	61,411	193,481
1. MERCHANDISE PROFIT	228,446	844,733
Advertising	30,898	86,045
Buyers' Salaries	11,173	46,610
Assistant Buyers' Salaries	3,938	21,517
Salespeople Salaries	23,450	107,919
Stockpeople Salaries	21,022	43,014
Buyers' Clerks	.....	2,775
DEPARTMENT EXPENSES	90,481	307,880
Inside Delivery	493	33,791
Direct Expenses	14,134	33,161
Rent	43,541	108,713
Proportion of General Expense	82,673	297,529
Window Rent	3,504	6,246
Outside Delivery	27,221	66,645
2. TOTAL EXPENSES	262,047	853,965
NET MERCHANDISING PROFIT	33,601*	9,232*
Cash Discount	8,796	43,505
Net Billed Discount	14,495	51,320
TOTAL PROFIT OR LOSS	10,310*	85,593

*Loss.

The management of the Mollart Company was endeavoring to make of the store a group of specialty shops selling exclusive merchandise. This policy applied to the furniture department as well as to the wearing-apparel departments. For this reason, the buyer for the furniture department endeavored to have new and exclusive types of merchandise with individual models in stock whenever they were obtainable. He wished to attract customers to the furniture department on the basis of the exclusiveness of the merchandise carried. There were in the city several stores, selling furniture only, which were conducted on this basis. Prices in these stores were much higher than were those for similar grades of furniture sold by the Mollart Company. Other furniture stores in the city offered merchandise at lower prices. This class included the so-called shopping stores, such as the instalment stores. The furniture department of the Mollart Company did not come into direct competition with stores of either of these classes. Its severest competition was from the furniture departments of four or five other department stores in the city.

The purchasing of furniture was somewhat different from the purchasing of style merchandise such as women's ready-to-wear clothing, in that furniture styles were slower to change and that there was less danger of loss in anticipating sales. In this connection the location of the source of supply had to be taken into consideration, because the farther a store was from its source of supply the larger the stock which it had to carry and the slower the rate of stock-turn.

Usually the former buyer of the furniture department of the Mollart Company had taken four buying trips a year, in January, May, June, and November, when he had looked over the lines of furniture offered and selected those which he considered most desirable for the Mollart Company's store. He had not bought any furniture in European markets. Most of the furniture sold in the store had been purchased in Grand Rapids, Michigan.

The new buyer intended to follow essentially the same procedure in inspecting and purchasing new merchandise. It was possible that he might make an experimental buying trip to Europe. He already had begun to reduce the department's stock of bedroom and dining-room suites and to increase the stock of novelty furniture as well as to double the stock of chairs.

As indicated in the profit and loss statement for 1924, the furniture department contributed a large volume of sales to the Mollart Company. The general overhead of the store was allocated to departments on the basis of the volume of net sales and so this department paid a substantial amount of the store's overhead.

The divisional merchandise manager believed that if the furniture department were discontinued, the store would lose most of its sales in blankets, rugs, and the other merchandise sold in the house-furnishings division, because if customers knew that the store did not sell furniture they would be disinclined to go there for related items.

The furniture department and the related departments helped to smooth out the sales peaks in the store and thus tended to make possible a more uniform use of the store's facilities. While the sales peaks of most department-store items came at Christmas time, the sales peaks of many items of merchandise sold in the house-furnishings division came during October, and, in the case of such items as summer furniture, grass rugs, and cretonnes, in the late spring.

Other departments in the store, such as the women's wearing-apparel departments, were more profitable than was the furniture department and used their selling space more efficiently. Also, the delivery expenses for the women's wearing-apparel and similar departments were not so high in proportion to the net sales as were those expenses in the furniture department. The furniture department's heavy delivery expense was the result of two things: first, practically all the items sold in the furniture department had to be delivered; second, many of them were bulky and heavy and damaged the more fragile articles in the delivery trucks. The furniture stock was kept in the store's warehouse. Deliveries of merchandise kept in stock were made direct from the warehouse. Other deliveries were made direct from the store. Warehouse rental charges were included in rent charged to the furniture department.

The new buyer for the furniture department made his plans for the year 1925 and submitted them to the merchandise manager. The planned profit and loss statements for the furniture department and for the house-furnishings division as a whole for 1925 were as shown on the following page.

HARVARD BUSINESS REPORTS

MOLLART COMPANY

PLANNED PROFIT AND LOSS STATEMENTS FOR 1925

	Furniture Department	House-Furnishings Division
Sales	\$875,000	\$2,947,000
Stock on Hand—Cost—Closing	140,000	574,700
I. MERCHANDISE PROFIT	322,875	1,060,678
Advertising	35,000	88,434
Buyers' Salaries	8,400	46,900
Assistant Buyers' Salaries	3,850	19,961
Salespeople Salaries	27,300	119,076
Stockpeople Salaries	21,000	48,150
Buyers' Clerks	.....	2,227
DEPARTMENT EXPENSES	95,550	324,748
Inside Delivery	612	34,271
Direct Expenses	17,675	40,158
Rent	43,925	112,607
Proportion of General Expense	103,338	348,042
Window Rent	4,375	8,478
Outside Delivery	34,038	80,214
2. TOTAL EXPENSES	299,513	948,518
NET MERCHANDISING PROFIT	23,362	112,160
Cash Discount	10,938	49,212
Net Billed Discount	18,112	60,484
TOTAL PROFIT	52,412	221,856

According to the plans, sales in the furniture department in 1925 were to be \$875,000 as compared with 1924 sales of \$700,268, and the department was to show a net profit on sales of 6% instead of a loss of 1.5% as in 1924. The planned profit for the division as a whole was 7.5% of net sales.

The merchandise council of the Mollart Company decided to continue the furniture department in operation, attempting to realize the plans of the buyer. The council did not believe that the more profitable departments in the store could be expanded sufficiently to use the space occupied by the furniture department

to better advantage than that department could be developed to use it. Moreover, as stated, the department bore a large amount of overhead charges.

COMMENTARY: This case furnishes an interesting comparison with the Morken Department Store case.² The commentary on the latter case concluded that groceries carrying either a convenience appeal or a specialty appeal were not suited for sale in a department store because the department store is primarily a "shopping goods" institution.

The issue raised in the Mollart Company case was whether or not the furniture department, which had been losing money, should be discontinued. The gross margin of the department was approximately 32% of its net sales. While no comparable figures for the retail furniture trade as a whole are available, the figures which are available for department stores would lead one to believe that in the furniture department of this store the gross margin was too low. The expenses, on the other hand, were high, especially the indirect expenses. The furniture department was occupying 2,100 square feet of floor space for which the rental expense was approximately 6% of net sales, a figure substantially higher than the common figure of 3% for department stores with annual net sales of over \$1,000,000 in 1924.³ Unless unusual, and probably unwarranted, concessions were to be made to the furniture department, these indirect expenses could not be reduced greatly.

The issue then comes to a determination of whether or not the appeal used in merchandising the department should have been changed. It is noted in this connection that a new buyer had taken charge of the department and was to continue the policy of selling exclusive merchandise. The advertising copy for the furniture department, furthermore, stressed chiefly the quality of the furniture. The case also states that the Mollart Company did not consider its furniture department to be in direct competition with the so-called shopping furniture stores of the city.

From the above it can be taken that the Mollart Company was attempting to create a specialty appeal for its furniture. This case is somewhat similar to that of the Morken Department Store, referred to above, in which a department store was attempting to create in one of its departments an appeal different from that which it must use for practically all its lines of merchandise.

There are three types of furniture stores; first, those which sell on

² See page 295.

³ Bureau of Business Research, Harvard University, *Bulletin No. 53, Operating Expenses in Department Stores in 1924*, p. 25.

a straight specialty basis. In that group are usually the very high grade furniture stores, the interior decorating shops, and some of the present-day antique stores. Their appeal is not based upon price, but rather upon a reputation for certain special qualities which each institution has been able to build up surrounding its name. Second, there are the middle-price furniture stores and furniture departments in which a variety of stocks gives the consumer at the time of purchase an opportunity to compare values and allows a distinct shopping appeal to be used. Third, is the group of low-price instalment furniture stores whose main appeal is based upon price and credit facilities which place them as vendors of low-grade shopping goods.

Department stores are best suited to compete with the second group of furniture stores. It is believed, therefore, that the Mollart Company should have placed its main appeal for its furniture department on shopping goods, and that instead of increasing the price for novelty features or attempting to build up a high-class specialty appeal in its department, it should have followed the policy of giving comparable values and a wide variety of selection in its lines. It should have taken those steps before it again considered the discontinuance of the furniture department.

October, 1925

D. K. D.

PENNIMAN COMPANY¹

CHAIN STORES—GROCERIES

SEASONAL SALES—*Sale of Perishable Produce to Offset Seasonal Sales Decrease in Chain Grocery Stores.* In order to offset the regular seasonal sales decrease in its chain of grocery stores during July and August, this company decided, in 1924, to sell fresh fruits and vegetables in its stores. Sales showed an increase in July and August of that year, and the company planned to continue selling fresh fruits and vegetables.

PERISHABLE PRODUCE—*Purchase and Control of, in Chain Grocery Stores.* When this company decided to sell fresh fruits and vegetables in its chain of grocery stores, in an effort to offset the seasonal sales decrease in July and August, it had to adopt methods of purchase and control different from those for its regular merchandise. A special buyer was trained to purchase fresh fruits and vegetables; purchases and deliveries to the stores were made daily; and, because of the risk of spoilage, store superintendents and managers were given some latitude in changing the prices set by the central office.

(1924)

¹ Fictitious name used for purpose of disguise.

The Penniman Company operated a chain of 80 one-man grocery stores located within a radius of 20 miles from its central office and warehouse. It sold bulk and package staple groceries and milk. Seventy per cent of the merchandise in the stores was delivered from the central warehouse. The remaining items, consisting of bread, milk, cake, yeast, salad dressings, crackers, and wafers, were delivered directly to the stores by the sellers, who were paid by the central office.

The company employed 5 store superintendents, each of whom was in charge of 16 stores, which he visited at least once daily. Each night the store superintendents reported to the general manager at the central office. A store superintendent, in addition to his other duties, took a physical inventory at least once a month in each of the stores under his supervision.

Every year there had been a decrease in the sales volume of the company during July and August. In 1924 the general manager proposed that the stores sell fresh fruits and vegetables to prevent the seasonal decrease in sales in that year, and he submitted a plan for selling such merchandise. At that time, none of the competing chain stores sold fresh fruits and vegetables. The general manager, who had had experience in an organization which operated a chain of markets, was of the opinion that the stores of the Penniman Company were located so that they could successfully sell perishable fruits and vegetables. Since the central office of the Penniman Company was located in a city in which there was a large fruit and vegetable market, such merchandise could be secured as needed. The terms of payment current in that market provided for weekly settlements.

The general manager recognized that the regular system of store and merchandise control of the Penniman Company was not suitable for the purchase and control of fresh fruits and vegetables in the separate stores. He proposed, therefore, a method of buying, delivering, and selling fresh fruits and vegetables which, in many respects, was unlike the methods followed in controlling the regular merchandise.

Most of the regular merchandise was ordered weekly by the store managers and delivered from the company's warehouse by trucks contracted for with an express company; the rest was ordered from sellers as needed and was delivered to the stores by the sellers. All purchases of regular merchandise were billed

to the central office. When merchandise was delivered from the warehouse, a triplicate form was filled out. The quantity delivered and the retail price per unit were entered at the warehouse. The original and second copies were sent to the central office. The third copy, which had a detachable stub serving as a receipt form, was sent to the store with the merchandise. As the merchandise was delivered, it was checked by the store manager, who then signed the stub and returned it to the truck driver. If the merchandise differed in quantity or kind from that listed on the form, the difference was noted on the stub. When the truck driver returned the stub to the central office, the information on it was extended at retail and posted to the second copy of the duplicate form, which was mailed to the store. After the original copy had been extended at retail and also at cost, it became the basis of the charge to the store's account with the central office.

The store managers ascertained the retail prices for merchandise delivered from the warehouse from the delivery forms and the invoices; for other merchandise, the central office provided the managers with lists of the retail prices. All merchandise received by the stores was charged to them in the records at the central office at both cost and retail. All price changes were dictated by the central office. When the price of an item of regular merchandise was changed, the store managers submitted credit slips reporting their stocks on hand; these slips were the basis of debits to the store accounts at the central office if the prices were increased, and of credits, if they were reduced.

Store managers could not place weekly orders with the central office for perishable goods, since they could not anticipate their needs for an entire week. The general manager proposed, therefore, that the requisitions for fresh fruits and vegetables be made daily by the store superintendents, with the advice of the store managers. For this purpose, he suggested the use of a form on which the superintendents were to enter the quantities of merchandise desired opposite the names of the items. One form was to be filled out for each store. The triplicate form used for reporting the shipments of regular merchandise could be used to record shipments of fresh fruits and vegetables, but, instead of being made out at the warehouse, it would be made out by the buyer of fruits and vegetables after he had decided upon the merchandise to be sent to a store. The three copies then would

follow the same routes as those forms made out for shipments of regular merchandise.

The general manager of the Penniman Company was the only person in the organization who had had experience in buying perishables. Since in addition to his managerial duties he purchased the merchandise regularly sold by the company, his time was fully occupied. He was willing, however, to train one of the men in the organization to be the buyer of fresh fruits and vegetables.

The buyer of the new line of merchandise was to purchase it in the same city markets for perishable fruits and vegetables as those in which the buyers from wholesale companies purchased. Each afternoon he was to report to the general manager those products that he could secure and their prices. Because the general manager was of the opinion that fresh fruits and vegetables had to be sold on a price basis to attract attention, he proposed not to stock so complete an assortment as was obtainable in the market, but to purchase only those products that he could secure at attractive prices. Each afternoon when the fruit and vegetable buyer submitted his report, the general manager was to go over it with him. They would decide which products to purchase and would establish retail prices for those products. After the orders had been received from the store superintendents, the quantities to be purchased would be determined. The distribution of the merchandise purchased would be as nearly as possible in accordance with the requisitions of the store superintendents.

The fact that fruits and vegetables would have to be delivered to the stores daily would necessitate an agreement with the express company for regular daily deliveries. To avoid unnecessary rehandling, the merchandise would be taken directly from the fruit and vegetable market to the stores. Deliveries were to be scheduled so that the stores would receive fresh fruits and vegetables daily by noon. To facilitate shipment, it was proposed that the buyer should purchase the more hardy products in the afternoon previous to the day of shipment and purchase the more perishable products on the morning of shipment. The deliveries of these two groups of purchases could be combined and routes established so that a truck could deliver its load within five hours after it started from the shipping point.

The selection of a method by which perishable produce might be sold in the stores of the Penniman Company presented difficulties, since that merchandise was not so well standardized as the merchandise regularly sold. Prices charged by unit stores for perishable produce were more at variance than those for staple merchandise.

The general manager proposed that the central office adopt a method of control over the retail prices of perishable merchandise, different from that used in controlling the retail prices of its other merchandise. It was his intention to feature fresh fruits and vegetables in the regular newspaper advertisements of the stores. He suggested that the prices quoted in the advertisements should be the retail prices at which the merchandise was billed to the stores. Store managers were to place some of the advertised merchandise on sale at the advertised prices. If part of the merchandise delivered to the stores was of a better quality than competing stores were selling at the prices advertised, the store managers were to be encouraged to sort the merchandise so that they could sell the better parts of the shipments for more than the billed prices. Thus, store managers could build up inventory overages which would be of advantage to them as reserves against possible shortages. The store managers were not to sell any of the perishable produce at prices below those at which it was billed, however, except on order from their store superintendents.

The store superintendents were to be instructed to watch closely the stock of perishable produce in their stores on Saturdays and, if a store was overstocked on an item, to transfer part of it to a neighboring store which was understocked. If it was not feasible to transfer the merchandise, either because the surplus quantity was small or because near-by stores were not understocked on those items, the price was to be reduced by 3 o'clock on Saturday afternoon to a figure at which the store superintendent believed the merchandise could be sold. If this merchandise had not been sold by 7 o'clock on Saturday evening, it was to be sold at whatever price customers would pay. During the week, store superintendents could reduce the price of merchandise that would spoil before it could be sold at the billed price. Such action, however, had to be justified by the store superintendents when

they made their daily reports to the general manager. The regular credit slips were to be used for the report of transfers between the stores, of price reductions, and of the quantity and billed retail value of merchandise spoiled. The credit slips had to be approved by the store superintendents before they were mailed to the central office. Since the superintendents made daily calls on the stores under their supervision, the slips could be approved and mailed to the central office daily.

The general manager estimated that his plan could be put into effect at a cost of from 13% to 14% of the estimated sales volume of the perishable merchandise. In addition to store expenses, the estimated cost included the buyer's salary, cost of cartage, and the extra auditing cost which would be incurred by the increased number of invoices sent to the stores and of credit slips returned by the stores. From his previous experience with a chain of markets, the general manager estimated that if the Penniman Company purchased in competition with, rather than from, wholesale buyers, it could purchase perishable produce for approximately 25% less than the price paid by unit stores for similar merchandise. He was of the opinion that merchandise so purchased could be sold at a mark-up of 40%, based on the selling price, and still be priced at approximately 20% under the prices charged by unit stores. No reserve was to be set up for loss by spoilage, but the shrinkage through spoilage was to be deducted from the original selling price; this deduction, he estimated, would leave a gross margin of more than 20%. The gross margin on other merchandise varied from 18% to 22%.

The stores could sell fresh fruits and vegetables without requiring additional employees or equipment. The general manager believed that such a line of merchandise not only would prove profitable, but would attract new customers and increase the sales of other merchandise.

The chief obstacles to the successful operation of the plan, in the general manager's opinion, were the regulation of purchases to prevent spoilage, and the training of the store managers, the superintendents, and the buyer. The failure to offer regularly certain fruits and vegetables throughout their seasons could be offset by stressing in the advertising that the products advertised were special items.

The Penniman Company adopted the plan as submitted and put it into effect in May, 1924. The total sales during May and June were about the same as usual, but sales increased 7% in July over June, and 3% in August over July, instead of decreasing as they had in other years. Sales of fresh fruits and vegetables were 10% of the total sales in May and June, and 15% in July and August. The gross margin realized in May was 16%, but this was increased to about 23% in June and to slightly over 25% in July and August. The company was satisfied with the experiment and planned to continue the selling of fresh fruits and vegetables throughout the year, as long as it was possible to purchase satisfactory merchandise to resell on a price basis.

COMMENTARY: Bulk and package groceries are strictly convenience goods in that they are usually purchased from easily accessible stores. "Chain" grocery stores are outstanding examples of stores which have succeeded in furnishing groceries in accessible locations.

The issue in this case was whether to add fruits and vegetables to the established line of standard bulk and package groceries. Vegetables are perishable, and also shrink in bulk and weight to a substantial degree. They are not standardized and seldom are offered in containers.

The success of chain-store organizations is based upon centralized control of warehousing, records, prices, and inventories. They can best sell standardized articles. They secure control of the individual stores in sending merchandise to those stores, thereafter controlling the prices at which the merchandise is to be sold, and at stated periods demanding either the merchandise or its equivalent in money.

In handling perishable commodities, such as vegetables, it would have been impossible for the central organization of the Penniman Company to secure a positive control of store prices and inventories. Vegetables, when sold by weight or bulk, might shrink considerably in a short period of time. As a result of the shrinkage, the individual stores would have substantial stock overages or shortages, which would fluctuate so widely that the usual methods of control, established to care for stock variations, would be ineffective.

There is an important theoretical point which also is apparent in the event of the Penniman Company's carrying vegetables. If we admit that groceries are sold as convenience goods, we find that vegetables, while undoubtedly convenience goods, are shopped for by customers who compare values in vegetables at the time of purchase. This fur-

nishes an element of shopping appeal which is not suited to chain grocery store distribution.

The conclusion is that the Penniman Company should not have handled fresh fruits or vegetables, for those goods are purchased somewhat on the shopping basis, which is unsuited to the convenience appeal of the "chain" grocery stores. In addition, the unstandardized form of vegetables and fruits and the shrinkage through spoilage and loss in weight would be such as to make impossible proper control methods, as currently used in the centralized control system of chain grocery stores.

November, 1925

D. K. D.

WAUKON COMPANY¹

CHAIN STORES—GROCERIES

INVENTORY CONTROL—*Methods of Eliminating Stock Shortages in Chain Grocery Stores.* A company operating 80 chain grocery stores found that the centralization at the central office of the records of the stores' operations did not provide satisfactory inventory control, since it had difficulty in reconciling its book inventories with the physical inventories. Two years after the company had provided that records be kept at the stores as well as at the central office, revised its accounting procedure, and provided that physical inventories be taken by persons associated with the operation of the stores instead of by persons from the central office, the large stock shortages previously experienced had been replaced by stock overages.

STOCK SHORTAGES—*Chain-Store Managers' Responsibility for.* When it revised its system of inventory control, a company operating a chain of grocery stores provided that store managers were to be held responsible for all actual stock shortages.

PHYSICAL INVENTORY—*Methods of Taking, in Chain Grocery Stores.* The company, which operated a chain of 80 retail grocery stores, encountered large stock shortages under a system by which physical inventories were taken at irregular intervals, averaging once in four weeks, by a traveling squad directly under the supervision of the central office. This system was changed to provide for physical inventories taken by store supervisors with the aid of store managers at unannounced times, averaging once in four weeks. Together with changes in the system of merchandise records, this method of taking physical inventories proved effective in minimizing stock shortages.

(1922)

¹ Fictitious name used for purpose of disguise.

The physical inventories in the 80 grocery stores operated by the Waukon Company regularly had shown stock shortages amounting to approximately 1% of the total sales volume for the period involved. In 1922 the company secured a new general manager. This general manager recommended that the company change its methods of inventory control.

The Waukon Company's 80 stores all were within 20 miles of its central warehouse. Each store employed one man, the store manager. For every 16 stores there was a store supervisor. The central office controlled all retail prices.

The company divided the merchandise which it sold into nine departments: milk, fruits and vegetables, butter and eggs, tea, coffee, sugar, packaged crackers, bulk crackers, and groceries. All merchandise except bakery products, crackers, milk, and yeast was purchased centrally. These items and fruits and vegetables were delivered to the stores directly from the sellers. All other merchandise was delivered from the company's warehouse.

Under the system of accounting in force, all merchandise was paid for by the central office and charged to the stores both at cost and retail prices. Billing to stores was done at retail only, however, so that the store managers did not know the cost of the merchandise. Merchandise received in the warehouse was credited to the warehouse at cost. Store managers requisitioned the merchandise from the warehouse as needed. A duplicate invoice form was used. One copy with an extension of prices at retail was sent to the warehouse, where it was used as the order for merchandise. This copy was sent with the merchandise to the store. The store manager receipted the invoice after checking the merchandise received, entered the amount of the invoice on his receiving book, and returned the copy of the invoice to the central office, where it became the basis of a record which credited the warehouse for the merchandise at cost and debited the store's ledger account at both cost and retail. The other copy of the invoice remained in the central office as a record of the transaction. The only record which the store manager had of merchandise received was that in the receiving book.

The merchandise purchased directly by the store managers was charged to the stores at cost and retail at the central office but was not entered upon the record of merchandise received in

the warehouse. Each store recorded merchandise which it returned to the warehouse or transferred to another store, or which had spoiled, on credit slips which had to be approved by a store supervisor. These credit slips were duplicate forms. In the case of transfers or returns, one copy was sent to the central office and one was sent with the merchandise. In the case of spoilage, both copies were taken by the store supervisor. The store manager had no record of the credit slips which his store issued. The credits were entered on the stores' ledger accounts at the central office directly from the credit slips.

Approximately once in every four weeks a physical inventory was taken in each store and in the warehouse by a traveling squad of two men. The items of merchandise were grouped by retail prices in these inventories. The inventory reports were returned to the central office. There they were checked with the book inventory figures derived from the records of merchandise shipped to the stores, returned, or transferred, and from records of the stores' sales, expenditures, and cash receipts, all of which were reported to the central office daily. This checking was for the purpose of verifying the book records and locating stock shortages. The retail value of each store's inventory was multiplied by the average percentage of gross margin from the last fiscal date to the date of the inventory and the result subtracted from the retail value to get the cost value of the inventory.

Frequently, when store managers did not have the inventories which the charges, credits, and sales records showed that they should have, they questioned the accuracy of the store records at the central office. The store managers, of course, had only the records in their receiving books. Inventory shortages had occurred so frequently that it had been necessary to establish a reserve against inventory shortage. The company had no method of checking the accuracy of an inventory report turned in by the traveling squad and, in case of discrepancies between that report and the book inventory, did not retake the physical inventory to see if a mistake had been made.

The physical inventories were taken at irregular periods, frequently in the middle rather than at the end of a week. Because of this fact and because the time of remittances from stores was not fixed definitely, confusion resulted in comparing the records

at the central office with the records of physical inventories at the stores. If an inventory taken after the store manager had made a remittance was compared with the book records before the remittance was entered there, a stock shortage appeared.

The new general manager was of the opinion that most of the inventory shortages which appeared were not actual but were the result of inaccurate or incomplete records in the central office and the absence of adequate records in the stores. He proposed a plan of inventory control which varied in several respects from the one in force and urged that the company adopt the plan as a means of minimizing inventory shortages.

Under the proposed plan, the practice of keeping a record of the merchandise in the warehouse and of charging to the stores at cost and retail was to be retained. Instead of a duplicate invoice form for store charges, however, a triplicate form was to be used, both an extended and unextended copy of which were to be sent to the store manager. The unextended copy would be used as an order on the warehouse to ship merchandise and would be sent with the merchandise to the store, checked by the store manager, and returned to the central office. The extended copy was to be sent later as the invoice to be entered in the store's receiving book, and was to be retained in the store's files. The use of an unextended copy as an order on the warehouse made possible quicker delivery to the stores.

The sales manager proposed that charges, instead of being entered directly to the store's ledger accounts, be recorded on four-month charge sheets, listing the merchandise sent according to the nine departments. There was to be a charge sheet for each store. This sheet would afford a rough approximation of sales by departments in the store.

Store sales and expenses were to be reported to the central office daily as before, but the store manager was to retain a copy of his report. Store supervisors were to read the cash registers and to collect the cash daily for deposit, leaving a record in the store of the cash received and the balance left. Sales, cash received, and expenses were to be recorded directly in the store's ledger accounts at the central office.

Credit slips were to be made in triplicate, the extra copy re-

maining in the store, and the others being distributed in the same way as under the existing system.

There was to be for each store a credit sheet, similar to the charge sheets, on which store credits were to be recorded. From the charge and credit sheets the stores' ledger accounts were to be debited and credited for merchandise items.

The sales manager proposed that the store inventories be taken by the supervisors with the aid of the store managers instead of by the traveling squad. This would tend to familiarize store supervisors with the conditions in the stores under their control. He proposed also that the store inventories be recorded on the form shown here as Exhibit 1. This form called for the same information as was required under the existing system but provided that the larger part of the information be obtained from records at the stores instead of from those at the central office.

One side of the proposed form provided columns for entries of items by retail prices and also spaces for a detailed inventory of items on which prices changed frequently and on which inventory shrinkage was likely to be large. There also was space for entries of stock surpluses, and a receipt form which the store manager was to sign affirming the accuracy of the inventory. The other side of the Inventory Statement, as the form was called, was divided into several sections. The "Stock Balance Section" was to be filled in at the central office from the records as of the end of the week preceding the inventories. The three sections, "On Hand This Date," "Expenses," and "Remittances," were to be filled in at the stores by the store supervisors. They were to fill in the "Total Assets" and the "Credits" sections from the receiving and credit slip books of the store managers, each item to be entered for the period since the time the last inventory was taken. The "Space to Be Filled in at Headquarters" showed the condition of the store to the date of the inventory as shown by the central office records, and was to check with the entries on the other side of the Inventory Statement.

All data taken from the records at the stores were to be checked by the records at the central office. Any discrepancies which appeared were to be reported to the store supervisor, who then was to recheck the items reported with the original invoices and the credit slips at the store.

All merchandise was billed to the stores at the quantity price: for instance, articles selling at 10 cents each or 3 for 25 cents were billed at the 3 for 25 cents price; and those packed in bulk to sell for 45 cents a pound or 23 cents a half-pound were billed at the pound price. Consequently, the physical inventories should show overages unless there were errors in the records, pilferage, or continual giving of overweight. If there was an inventory shortage, and the records other than the physical inventory agreed throughout, the inventory was to be retaken by a buyer whose buying duties did not take up his entire time. If this rechecking showed that the shortage was an actual shortage, the store manager would either have to make up the shortage or leave the employ of the company.

The inventory was to be reduced to a cost basis as under the previous plan, except that the percentage of gross margin for the four weeks preceding the date of the inventory was to be used instead of the percentage of gross margin to date since the previous fiscal period.

It was the intention of the general manager to have the store inventories taken on an average of once in every four weeks, but to have them taken without previous notice to the store managers. Under the existing system, the books were closed at the end of the fiscal year by physical inventories taken by the store managers. The new general manager proposed to close the books by the book inventory, believing that the physical inventory periods were short enough to prevent the occurrence of large errors in the book records.

The company adopted the general manager's plan in 1922. A store supervisor typically required from 1½ to 2 hours to take the inventory and collect the data from the records at any one store. In 1924 the general manager stated that stock shortages had practically disappeared, and that stock overages averaged from 1% to 2% of sales per year.

COMMENTARY: This case raises the issue between a completely centralized system of merchandise accounting and control in a chain grocery store on the one hand, and, on the other, a system calling for the maintenance of more merchandise records at individual stores and the placing of somewhat more responsibility on store managers. Under the former system store managers had only meager records of the mer-

chandise operations of their stores and they themselves were not responsible for the taking of physical inventories. Although such completely centralized control has been considered desirable for chain stores, this company's experience with stock shortages under this system indicates an inherent weakness in completely centralized control systems.

A stock shortage or overage is a discrepancy between book inventory figures and physical inventory figures. Thus the amount of stock shortages or overages can be determined only if book inventory figures are available. In order to secure such book inventory figures, chain grocery stores commonly maintain a running or perpetual book inventory at retail prices. The book inventory figure thus provided is checked at frequent intervals by a physical inventory at retail prices. Under these conditions the physical inventory is primarily a check on the book inventory figures, the latter even being used in many cases for the purpose of closing the books at the end of a fiscal period.²

Stock shortages may be either actual or clerical in character. Actual shortages represent merchandise not accounted for. Clerical shortages represent errors in the book inventory. In the case of stock shortages that are clerical in character, there has been no real loss of merchandise. It follows that the first step in dealing with the problem in stock shortages is to reduce possibilities of clerical error to a minimum. This the Waukon Company had not done. Consequently, it was not in a position to hold store managers strictly accountable for stock shortages. By means of the changes inaugurated in store records, and in their synchronization with the central office records, possibilities of clerical errors in the book inventory were greatly reduced. At the same time store managers were made in part responsible for the taking of physical inventories. These developments made it possible for the company to hold a store manager strictly accountable for any stock shortages which still persisted after a recheck of the physical inventory.

It is evident that the Waukon Company pursued a sound policy in making the changes described in this case. It may be suggested, however, that provision should have been made for occasional supplementary physical inventories taken by a traveling squad directly under the control of the central office, in order to minimize the possibility of collusion between supervisors and store managers.

The business principles exemplified in this case may be stated as follows:

1. Possibilities of error in book inventory figures must be reduced to a minimum before employees can be held completely accountable for stock shortages.

² See McNair, M. P., *The Retail Method of Inventory*, A. W. Shaw Company, Chicago, 1925, pp. 96-98.

2. The accountability of employees is conditioned by the knowledge and authority given them.

November, 1925

M. P. M.

BEVERLY COMPANY¹

WHOLESALE—GROCERIES

ACCOUNTING—*Departmentization of Operating Accounts to Improve Merchandise Control.* In order to improve control of purchases, sales, expenses, and net profit by classes of merchandise, a wholesale grocery company decided, in 1924, to divide its merchandise accounts into 10 departments and to allocate to each department its share of direct and overhead expenses. It cost \$1,000 to install this system and \$800 above the usual accounting expenses to operate it during the first year. The company was satisfied with the results.

(1924)

In addition to its regular wholesale grocery business, the Beverly Company roasted coffee, packed tea, sold fresh fruits, and blended molasses. The company, which was not departmentized, desired a system of accounts which would enable it to determine the net profits made on the different classes of merchandise sold.

The Beverly Company had annual sales of about \$2,500,000. All its customers were located within a radius of from 150 to 175 miles. Each customer was called upon once in 2 weeks by one of the company's 15 salesmen. The company paid the salesmen 30% of gross margin, after deduction of inward freight, and charged 40% of the loss from bad debts to them. From 25% to 35% of the company's sales were of merchandise sold under its private brand.

The company maintained two sets of records for the use of its seven buyers. The first set consisted of stock sheets upon which were recorded the physical quantities of merchandise in stock, and current purchases. A physical inventory was taken once a week for some items, once in two weeks for others, once a month for others, and, in some cases, only when requested by the buyers. A complete physical inventory was taken at the beginning and in the middle of each year. Ordinarily, the stock

¹ Fictitious name used for purpose of disguise.

sheets for similar items were grouped; for example, the stock records for all canned goods were kept together. The buyers were expected to note on these records the purchases which they made and the dates. Occasionally, a buyer purchased merchandise without consulting the stock sheet and neglected to enter the quantity purchased on the sheet.

In addition to the stock records, the company maintained a permanent and compact summary card system of purchase records, one card for each item. Upon these cards the buyers recorded all purchases. If manufacturers were not making prompt shipments, the buyers often noted on the purchase cards the dates on which the merchandise arrived. The card system preserved the information for use during a period of several years. Upon the basis of the stock sheets and the purchase cards, the buyers decided when to reorder and what quantities to purchase.

Previous to February, 1924, the accounting system of the Beverly Company had been simple. It had consisted of one general merchandise account which had been debited for all purchases and customers' returns, and credited for all sales and returned purchases. The gross margin at the end of the year had been computed as the difference between the total debits and the total credits. There had been separate expense accounts for interest, insurance, bad debts, advertising, and charity. The other expenses had been collected in a general expense account. The accounting system, therefore, had not permitted the company to compare all individual items of expense from year to year or to ascertain profits on individual classes of merchandise, unless complete abstracts were made up. The buyers of two classes of merchandise had attempted to calculate gross margins and net profits for these classes, but, even though the buyers could determine gross sales, they could not compute the amount of returns and allowances for the class, nor allocate expenses to them accurately.

In order to provide data readily comparable by years and by classes of merchandise, the Beverly Company, in February, 1924, decided to divide purchases, inventories, and sales into 10 departments and to allocate to each department its share of all expenses. The departments were: groceries, canned goods, dried

fruits, sugar, flour, molasses, tobacco, fruit, butter, and coffee. The latter department included tea and cocoa. The company paid an accountant \$1,000 to install the system.

The sales for each department were obtained from the salesmen's order blanks. This work required part of the time of two clerks each morning. Returns and allowances made to customers were determined from special blanks. Purchases, and returns allowed to the company by manufacturers, were obtained from sellers' invoices. The amount of cash discounts taken by customers was distributed between the departments on the basis of the ratios of departmental sales to total sales. First, however, the special discounts allowed by some departments were charged against those departments.

In addition to the 10 direct selling departments, there were 12 indirect or service department accounts: administration, office, general warehouse, receiving, garage, shipping, city delivery, advertising, traveling expense, general selling, salesmen's commissions, and interest. Each item of expense was analyzed and allocated, on a selected basis, to the direct and indirect departments. The totals of the indirect departments or accounts then were distributed to the selling departments, which, being the income-producing departments, ultimately had to bear all the expenses of the business. In the primary distributions, such items as rent, taxes, property insurance, employees' compensation insurance, group life insurance, depreciation, and freight out were charged almost entirely to the selling departments; other items of expense were charged mainly to the service department accounts at the first distribution, and then were distributed to the selling departments. Part or all of three indirect accounts, administrative, general warehouse, and garage, was divided among other indirect accounts before being distributed to the selling departments. The distribution of one month's expenses is shown in Exhibit 1

In the case of rent, the company, which rented its entire building space, determined that each square foot of floor space cost annually \$0.1234 and made an allocation to each department on the basis of the space usually devoted to that department. The company decided that the space of the various floors was of equal value.

EXHIBIT I

MONTHLY DISTRIBUTION OF EXPENSES TO DEPARTMENTS OF BEVERLY COMPANY

(Total expense for this month was \$20,663.31)

Indirect Accounts

Item	Admin- istra- tion	Office	General Ware- house	Receiv- ing	Garage	Shipping	City De- livery	Adver- tising	Travel- ing Expense	Selling, General	Salesmen's Commis- sion	In- terest
Rent.....	.....	\$ 19.38	.....	.....	\$ 93.92	\$ 47.39	.....	.....	.....	.....	.....	.....
Taxes.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Insurance.....	\$ 16.90	3.67	.....	.....	.....	.....	\$ 21.00	.....	.....	\$ 15.40	.....	.....
Compensation and Group	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Insurance.....	.62	10.99	\$ 2.18	\$ 3.34	.....	9.72	3.79	.....	.....	4.05	.....	.....
Depreciation...	26.67	52.41	.....	.....	.....	.....	95.74	.....	.....	52.13	.....	.....
Bad Debts.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600.00	.....	.....
Salaries.....	493.50	636.25	.....	400.00	.....	400.00	.....	.....	.....	98.75	.....	.....
Direct Expense.	37.35	393.87	.....	76.20	32.36	131.43	177.37	.....	.....	56.00	.....	.....
Pay-Roll.....	.....	1,618.00	232.00	356.00	.....	958.66	284.00	.....	.....	.....	.....	.....
Charity.....	.....	17.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Administrative.	.....	.....	57.50	.....	.....	.....	.....	.....	.....	517.54	.....	.....
General Ware- house.....	.....	.....	.....	30.91	.....	80.50	26.60	.....	.....	.....	.....	.....
Garage.....	.....	.....	.....	.....	.....	.....	*151.62	.....	.....	.....	.....	.....
Advertising.....	.....	.....	.....	.....	.....	.....	.....	\$532.91	.....	.....	.....	.....
Traveling Ex- pense.....	.....	.....	.....	.....	.....	.....	.....	.....	\$323.27	144.95	.....	.....
Salesmen's Com- mission.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$3,824.36	.....
Interest (actual amount paid).	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	\$575.04	\$2,751.57	\$291.68	\$866.45	\$126.28	\$1,627.70	\$760.12	\$532.91	\$323.27	\$1,572.32	\$3,824.36	\$857.93

* Adjusted for ledger account.

METHOD OF DISTRIBUTION

Administration—10% to General Warehouse; 90% to General Selling.
Office—On a basis of items shipped from each department.

General Warehouse—On basis of the amount of pay-roll charged each department.

Receiving—On a basis of items received in each department.

Garage—50% to City Delivery; 50% to Fruit Department.

Shipping—On a basis of items shipped from each department.

City Delivery—On a basis of items shipped in city.

Advertising—Directly to departments that benefit, on an estimated per-
centage.

Traveling Expense—Directly to departments or general selling.

Selling, General—Dollars of departmental sales.

Salesmen's Commission—Basis of gross margins of the different departments.

Interest—In inverse proportion to rate of stock-turn in departments.

EXHIBIT I (Continued)

Direct Selling Departments

Expenses Distributed Directly to Departments	Groceries	Canned Goods	Dried Fruit	Sugar	Flour	Coffee	Molasses	Tobacco	Fruit	Butter	Total
Rent.....	\$ 300.97	\$ 162.91	\$ 30.23	\$ 15.11	\$ 35.00	\$ 89.68	\$ 237.36	\$ 30.23	\$ 137.81	.....	\$ 1,039.30
Taxes.....	160.45	251.85	16.39	9.48	16.39	82.80	103.50	61.24	51.75	\$ 2.15	756.00
Property Insurance...	37.35	58.64	3.81	2.21	3.82	19.28	29.66	15.71	40.30	4.75	215.53
Compensation and Group Insurance...	243.87	.90	.....	1.15	.....	4.55	3.67	3.57	10.84	5.25	273.80
Depreciation.....	.....	.....	.....	.....	.....	12.50	4.17	2.50	123.23	9.75	152.15
Direct Expense.....	.....	.....	.....	25.00	.....	76.83	5.00	70.03	174.31	.....	351.17
Pay-Roll.....	97.40	136.17	5.42	134.78	14.27	623.16	402.24	406.56	1,470.00	104.00	3,394.00
Salaries.....	.....	226.25	16.25	24.38	59.16	161.25	129.50	83.33	125.00	.....	825.12
Freight Out.....	267.06	197.49	19.26	22.19	31.26	72.86	123.39	13.05	41.46	29.08	817.10
Garage.....	.....	.....	.....	.....	.....	.....	.....	.....	63.14	.....	63.14
Expenses Distributed from Indirect Accounts											
Office.....	807.53	293.97	39.67	89.90	34.81	183.79	29.97	582.98	652.08	36.87	2,751.57
General Warehouse...	9.63	12.25	.58	12.25	1.46	47.55	35.88	35.00	.....*	.....*	154.60†
Receiving.....	341.66	185.53	38.32	30.78	246.57	20.52	.23	2.84	.....*	.....*	866.45
Shipping.....	650.50	268.00	36.17	81.33	95.20	251.30	68.20	177.00	.....*	.....*	1,627.70
City Delivery.....	149.38	74.97	7.62	30.02	50.46	81.13	15.08	84.68	.....*	.....*	493.34†
Advertising.....	88.68	177.37	.....	.....	.....	183.36	.....	.....	.....	.....	449.41
Traveling Expense...	7.30	10.43	.....	.....	.....	22.13	41.60	.....	57.48	39.38	178.32
General Selling.....	338.98	177.18	26.15	120.17	71.70	156.35	75.67	306.54	238.47	61.11	1,572.32
Salesmen's Commission.....	920.82	568.78	90.42	206.24	163.40	482.86	280.43	524.30	533.76	53.35	3,824.36
Interest.....	71.29	159.79	85.22	14.65	39.62	99.87	307.26	35.62	19.64	24.97	857.93
Total.....	\$4,492.87	\$2,962.48	\$415.51	\$819.64	\$863.12	\$2,671.77	\$1,892.81	\$2,435.18	\$3,739.27	\$370.66	\$20,663.31

*These departments had their own superintendent, and so forth, hence these items are charged above.

†Adjusted for ledger account.

Property insurance and taxes were distributed on the basis of average annual departmental inventories. Compensation insurance and group life insurance were distributed according to the proportion of pay-roll charged to each department. The depreciation on furniture and fixtures, calculated at 5% per annum, was charged to the office account. The depreciation on motor trucks and automobiles, calculated at 20% per annum, was distributed to the selling departments on a basis of sales. Some depreciation also was charged to the indirect accounts of administration, city delivery, and general selling.

Some portions of the charges for salaries and pay-roll were divided among seven of the indirect accounts—administration, office, general warehouse, receiving, city delivery, general selling, and shipping—and others were charged directly to selling departments. Executive salaries were charged directly to selling departments or to indirect accounts for redistribution, according to the manner in which each executive divided his time between direct departmental and general administrative work. Pay-roll was charged on the basis of a time study which had been made on pay-roll employees' activities.

The amount of outward freight incurred by each selling department was recorded by the delivery man who took the merchandise to the freight office, and was charged directly against the department.

Office expense, including all light and heat, was distributed to selling departments on a basis of the proportion which the items shipped from each department bore to the total number of items shipped. The number of items shipped each day and their distribution among departments were determined by the two clerks who distributed the sales each morning. The receiving expense was distributed among the departments in the proportion that the items received by each department bore to the total number of items received during the month. As handling expenses for some items were larger than for others, adjustments were made to allow for the differences. Shipping expense was distributed to selling departments on a basis of the proportion which the items shipped from the department bore to the total number shipped. Here, again, adjustments were made for differences between items in handling charges involved in shipment. For example, when ship-

ping expense was to be allocated, the number of bags or barrels of flour shipped was multiplied by three, the number of items of coffee by one-half, and the number of items of molasses by two and one-half. The number of items of tobacco, on the other hand, was divided by three. The numbers of items shipped of canned goods, dried fruits, sugar, fruits, and butter were not altered.

The city delivery expense, which was the expense incurred in delivering merchandise to local grocery stores, was distributed to the selling departments, with the exception of the fruit and butter departments, on a basis of the number of items shipped as adjusted for the allocation of shipping expense. As the fruit and butter departments had their own local delivery equipment, no allocation of the general city delivery expense was made to them.

As the largest part of the newspaper advertising expense was incurred in advertising the company's private brand, which was placed, for the most part, on canned goods, coffee, tea, and cocoa, the canned goods department was charged with about 40% of the newspaper advertising expense, the coffee, tea, and cocoa department with about 40%, and the grocery department with the remainder. All expense for advertising other than newspaper advertising was charged to general selling.

Any traveling expense incurred by a selling department was charged directly to the department if possible, and, if not, to general selling. General selling expense was distributed to the departments on a basis of the proportion of each department's sales to the total sales of the company.

The company did not charge salesmen's commissions at once to the selling departments in which they were earned. Instead, it found the ratios existing between the departmental gross margins used in calculations of salesmen's commissions and the gross margin of the company as a whole, and distributed salesmen's commissions to the departments in accordance with these ratios. For example, if the amount of gross margin of the grocery department were found to be 22% of the total amount of gross margin of the company, the grocery department was charged with 22% of the total salesmen's commissions.

The company did not believe that interest on owned capital

should be charged as an expense. Total interest payments made for borrowed capital were distributed to departments in inverse proportion to their rates of stock-turn; that is, a department with a stock-turn of eight was charged one-half as much interest as was a department with a stock-turn of four. The company recognized that this distribution would not be equitable if a department with an extraordinarily low inventory received an exceptionally low stock-turn. No such situation existed, however, among the departments of the Beverly Company.

To enable the company to make comparisons between the selling departments from month to month, total expense was distributed to them monthly. As the cost of determining the actual values of inventories monthly would have been excessive, their values were estimated as follows:

The executives of each selling department made a conservative estimate of the average gross margin which they expected their department to earn during the year. To the value of the departmental inventory at the beginning of the month was added the cost value of purchases made during the month. From this sum, gross sales minus an amount of gross margin computed at the estimated rate were subtracted. The resulting figure was taken as the value of the department's inventory at the end of

EXHIBIT 2

GROSS MARGINS FOR ESTIMATING MONTHLY INVENTORIES

Actual and Estimated Gross Margins Used by Beverly Company for Estimating Monthly Departmental Inventories, 1924 and 1925

Item	Percentages of Gross Margin Estimated for 1924	Percentages of Gross Margin Actually Received	Percentages of Gross Margin to Be Used in 1925
Groceries.....	12	14.24	13
Canned Goods.....	16	17.13	16
Dried Fruits*.....	18.25	18.26	...
Sugar*.....	4.34	4.34	...
Flour*.....	12	12	...
Coffee, Tea, and Cocoa	26	27.26	22
Molasses.....	30	34.70	30
Tobacco.....	9.5	8.59	9.5
Fruit.....	15	10.09	14
Butter*.....	1.57	1.58	...

*Actual value of monthly inventories to be determined in these departments.

the month. At the end of 1924, the company had an estimated inventory of \$474,000 and an actual inventory of \$457,000. The estimated percentages of gross margin used in 1924, the actual percentages of gross margin received, and the estimated gross margins to be used through 1925 were as listed in Exhibit 2 on page 329.

The net profit for each department in 1924 and the net profit for the company as a whole were as shown in Exhibit 3.

The records for 1924 showed that the Beverly Company in that year had lost money in four departments: sugar, tobacco, fruit, and butter. The net profit of the company as a whole had equaled 1.19% of net sales, computed without deduction of interest on owned capital. The monthly statements showed that the loss in the butter department had increased steadily from the first of the year. The vice-president of the company decided that the gross margin received from the sale of butter was not sufficient to cover costs. He decided, therefore, to discontinue active solicitation of sales in the butter department and to make only such sales as came without solicitation.

It was the opinion of the vice-president that the gross margin received in the fruit department was not so great as it should be. He believed that the loss in the department had been incurred because of poor management. An example of the poor management was the large amount of spoiled fruit which it had been necessary to throw away each day. He decided, therefore, to change the management of the fruit department entirely. The vice-president believed that the losses in the tobacco department could be reduced, if not eliminated, by a change in the sales force. This change was made.

The stock-turn of the Beverly Company as a whole had been 4.3 times in 1924. The vice-president believed that this rate was too low and that efforts should be made to increase it.

It was customary for the salesmen of the company to sell as large a proportion as possible of dried fruits, which included prunes, peaches, raisins, and apricots, in advance of their deliveries. The company purchased in advance of the drying season, or during it, sufficient quantities of dried fruits to meet sales in the heavy selling period of the late fall and early winter. In 1924, however, the buyer had overestimated the sales and had

EXHIBIT 3

DEPARTMENTAL PROFIT AND LOSS STATEMENT

Net Sales, Expenses, Gross Margins, and Net Profits in Departments of Beverly Company, 1924

	Groceries	Canned Goods	Dried Fruits	Sugar	Flour	Coffee, Tea, and Cocoa	Molasses	Tobacco	Fruit	Butter	Total
Gross Sales.....	\$534,987	\$373,649	\$44,807	\$146,079	\$110,774	\$200,145	\$ 99,247	\$387,437	\$427,274	\$158,691	\$2,483,090
Returns.....	13,594	5,657	810	504	2,213	1,813	551	3,639	6,370	2,123	37,274
Discounts.....	6,843	4,873	588	1,905	.....	2,587	1,311	4,944	2,841	.....	25,892
Allowances.....	705	270	6	11	18	135	37	8,617	1,073	61	10,933
Total.....	\$ 21,142	\$ 10,800	\$ 1,404	\$ 2,420	\$ 2,231	\$ 4,535	\$ 1,899	\$ 17,200	\$ 10,284	\$ 2,184	\$ 74,099
Net Sales.....	513,845	362,849	43,403	143,659	108,543	195,610	97,348	370,237	416,990	156,507	2,408,991
Inventory.....	91,788	150,894	10,124	3,774	10,052	50,510	103,874	31,547	44,485	3,698	500,746
Purchases less											
Discounts.....	440,676	316,638	33,975	133,190	87,646	134,221	11,417	339,147	319,882	147,419	1,964,211
Inward Freight..	8,201	15,905	3,854	3,222	2,991	4,013	5,615	181	27,460	3,785	75,227
Total.....	\$540,665	\$483,437	\$47,953	\$140,186	\$100,689	\$188,744	\$120,906	\$370,875	\$391,827	\$154,902	\$2,540,184
Less Inventory..	100,000	182,745	12,477	2,769	5,167	46,458	57,333	32,451	16,900	863	457,163
Cost of Sales....	\$440,665	\$300,692	\$35,476	\$137,417	\$ 95,522	\$142,286	\$ 63,573	\$338,424	\$374,927	\$154,039	\$2,083,021
Gross Margin....	73,180	62,157	7,927	6,242	13,021	53,324	33,775	31,813	42,063	2,468	325,970
Net Expense....	63,598	46,433	5,732	9,865	10,465	32,874	21,221	34,028	63,634	9,473	297,323
Net Profit.....	\$ 9,582	\$ 15,724	\$ 2,195	*\$ 3,623	\$ 2,556	\$ 20,450	\$ 12,554	*\$ 2,215	*\$ 21,571	*\$ 7,005	\$ 28,647
Percentage of—											
Gross Margin..	14.24	17.13	18.26	4.34	12.00	27.26	34.70	8.59	10.09	1.58	13.53
Total Expense..	12.38	12.80	13.20	6.86	9.64	16.81	21.80	9.19	15.26	6.05	12.34
Net Profit.....	1.86	4.33	5.06	*2.52	2.36	10.45	12.90	*.60	*5.17	*4.47	1.19
Stock-turn(times a year).....	4.6	1.8	3.1	42.0	12.6	2.9	.8	10.6	12.2	67.5	4.3

*Loss. †Interest on owned capital not calculated by company.

purchased a six months' supply. It was the opinion of the vice-president that the production of dried fruits was greater than the demand and that consequently price changes throughout the year would tend to be downward. For this reason he desired a rapid stock-turn in that department. He intended to have a careful study made of the company's sales of dried fruits during the fall of 1925 and to have purchases for the department limited to from 10 weeks' to 3 months' supply.

The officials of the Beverly Company were satisfied with the results obtained from departmentizing the purchases, sales, and expenses of merchandise. The departmentization had given them information which they believed would enable them to increase the net profits of the company in 1925. The cost of obtaining the additional information had not exceeded \$800.

COMMENTARY: This case provides an excellent example of the application of cost methods to a non-manufacturing business. The previous accounting practices of this company, as described early in the case, were distinctly inadequate; the use of a mixed merchandise account, and the overworked general expense account, both suggest that these methods had originated with the small beginnings of the business itself. The volume of sales had reached a point where such general figures no longer supplied the management with information that was sufficiently definite and precise for an intelligent administration of the business. Without doubt more detailed accounting records were essential, even if they had not gone to the extent of the cost analysis described in the case.

The allocation of expenses to departments and the redistribution of the indirect departments for the most part followed orthodox lines. It is worthy of comment, however, that most of the fixed charges were distributed immediately to the direct selling departments, without first charging the indirect departments with a proportionate share. It may be inferred that the management did not consider it essential to find the total costs of operating the indirect departments, so long as the officials were correctly informed as to the total cost of the direct departments. In any event, no responsibility could have attached to the indirect departments for the amount of these fixed charges which might be allocated to them; apparently it was considered sufficient to allocate to them only those items for which they could definitely be held responsible. The same practice is followed frequently in the case of manufacturing plants.

The bases of redistribution of indirect departments, as described at

the foot of Exhibit 1, all seem reasonable, with the possible exceptions of general warehouse expense and interest. It may be that actual experience showed that the departmental pay-rolls were as good a basis as any for the distribution of warehouse expense, but no direct connection between the two things is apparent. In the case of interest on departmental inventories it would appear that no consideration was given to the amount of the inventory, but only to the rate of its turnover. Exhibit 3 shows that departmental inventories varied from \$4,000 to \$150,000. If it was the practice to charge these departments with equal amounts of interest expense, except for the variations in their turnover, it seems that inadequate consideration was given to this item.

It may be noted, without comment, that this company did not think it well to charge interest on owned capital as an operating expense.

The summary of the results obtained from the departmental figures, as described on the last two pages, and the action taken in unsatisfactory departments, provide ample justification of the extra work involved in obtaining this additional information. It would have been impossible for the vice-president to have acted with knowledge of the facts, if the additional accounting work had not been undertaken; in those circumstances the unsatisfactory conditions in the sugar, tobacco, fruit, and butter departments probably would have continued unknown and unchecked. It should, of course, be understood that some departments may be carried at a loss, for the purpose of filling out a line, or because they help to make profits in other departments. Although the departmental figures might show this loss, it does not follow that the departments can be abolished, or that it is desirable to do so. What is desirable is that the proprietors shall know all the facts.

April, 1926

T. H. S.

WILLIAM R. WARNER & COMPANY V. ELI LILLY & COMPANY¹

MANUFACTURER—PHARMACEUTICALS AND CHEMICALS

TRADE-MARKS—*"Coco-Quinine" Not Infringed by "Quin-Coco."* Since 1899, Eli Lilly & Company had made a liquid preparation of quinine which it vended under the name of Coco-Quinine. From 1906, William R. Warner & Company, by itself and through associates, had made and distributed a substantially similar preparation under the name of Quin-Coco. The Supreme Court of the United States held that each name was descriptive of the ingredients which entered into the respective

¹ Supreme Court of the United States. Argued April 28 and 29, 1924. Decided June 9, 1924. 44 Sup. Ct. 615.

preparations and, therefore, that the name Quin-Coco was not an infringement of the name Coco-Quinine, though the effect of its use might be to cause the public to mistake the origin or ownership of the preparation.

UNFAIR COMPETITION—*Inducing Retailers' Substitution of Chemical Preparations.* Since 1899, Eli Lilly & Company had made a liquid preparation of quinine which it vended under the name of Coco-Quinine. From 1906, William R. Warner & Company, by itself and through associates, had made and distributed a substantially similar preparation under the name of Quin-Coco. An extensive and valuable market for the first-named preparation had been established when the latter preparation was put on the market, and in order to sell Quin-Coco, William R. Warner & Company sought to avail itself of the favorable repute which had been established for Coco-Quinine, the company's salesmen either in direct terms or by suggestion or insinuation inducing the substitution by retail druggists of the latter when the former was called for by customers. The Supreme Court of the United States decided that William R. Warner & Company was guilty of unfair competition, though no deception had been practiced on the retail dealers, and ordered that the decree of injunction require that original packages sold to druggists should not only bear labels clearly distinguishing William R. Warner & Company's bottled product from the bottled product of Eli Lilly & Company, but that those labels should state affirmatively that the preparation was not to be sold or dispensed as Coco-Quinine or be used in filling prescriptions or orders calling for the latter.²

(1924)

Mr. Justice SUTHERLAND delivered the opinion of the Court.

Respondent is a corporation engaged in the manufacture and sale of pharmaceutical and chemical products. In 1899 it began and has ever since continued to make and sell a liquid preparation of quinine, in combination with other substances, including yerbasanta and chocolate, under the name of Coco-Quinine.

Petitioner also is a pharmaceutical and chemical manufacturer. The Pfeiffer Chemical Company, Searle & Hereth Company, and petitioner are under the same ownership and control. The first-named company in 1906 began the manufacture of a liquid preparation which is substantially the same as respondent's preparation and which was put upon the market under the name of Quin-Coco. Two years later the Searle & Hereth Company engaged in the manufacture of the preparation, which ever since has been sold and distributed by petitioner.

This suit was brought in the Federal District Court for the Eastern District of Pennsylvania by respondent to enjoin petitioner from continuing to manufacture and sell the preparation if flavored or colored with chocolate, and also from using the name Quin-Coco, on the ground

² Headnote by Harvard Graduate School of Business Administration.

that it was an infringement of the name Coco-Quinine, to the use of which respondent had acquired an exclusive right. The District Court decided against respondent upon both grounds. 268 Fed. 156. On appeal the Court of Appeals ruled with the District Court upon the issue of infringement, but reversed the decree upon that of unfair competition. 275 Fed. 752.

The entire record is here and both questions are open for consideration.

First. We agree with the courts below that the charge of infringement was not sustained. The name "Coco-Quinine" is descriptive of the ingredients which enter into the preparation. The same is equally true of the name "Quin-Coco." A name which is merely descriptive of the ingredients, qualities, or characteristics of an article of trade cannot be appropriated as a trade-mark and the exclusive use of it afforded legal protection. The use of a similar name by another to truthfully describe his own product does not constitute a legal or moral wrong, even if its effect be to cause the public to mistake the origin or ownership of the product.³

Second. The issue of unfair competition, on which the courts below differed, presents a question of more difficulty. The testimony is voluminous, more than 200 witnesses having been examined; but, since the question with which we are now dealing is primarily one of fact, we have found it necessary to examine and consider it. Nothing is to be gained by reviewing the evidence at length, and we shall do no more than summarize the facts upon which we have reached our conclusions.

The use of chocolate as an ingredient has a threefold effect: It imparts to the preparation a distinctive color and a distinctive flavor, and to some extent, operates as a medium to suspend the quinine and prevent its precipitation. It has no therapeutic value; but it supplies the mixture with a quality of palatability for which there is no equally satisfactory substitute. Respondent, by laboratory experiments, first developed the idea of the addition of chocolate to the preparation for the purpose of giving it a characteristic color and an agreeable flavor. There was at the time no liquid preparation of quinine on the market containing chocolate, though there is evidence that it was sometimes so made up by druggists when called for. There is some evidence that petitioner endeavored by experiments to produce a preparation of the exact color and taste of that produced by respondent, and there is evidence in contradiction. We do not, however, regard it as important to determine upon which side lies the greater weight. Petitioner, in fact, did produce a preparation by the use of chocolate so exactly like that of respondent that they were incapable of being distinguished by ordinary sight or taste. By various trade methods an extensive and

³ *Canal v. Clark*, 13 Wall. 311, 323, 327, 20 L. Ed. 581; *Standard Paint Co. v. Trinidad Asphalt Co.*, 220 U. S. 446, 453, 31 Sup. Ct. 456, 55 L. Ed. 536; *Howe Scale Co. v. Wyckoff, Seamans & Benedict*, 198 U. S. 118, 140, 25 Sup. Ct. 609, 49 L. Ed. 972.

valuable market for the sale of respondent's preparation already had been established when the preparation of petitioner was put on the market. It is apparent, from a consideration of the testimony, that the efforts of petitioner to create a market for Quin-Coco were directed not so much to showing the merits of that preparation as they were to demonstrating its practical identity with Coco-Quinine, and, since it was sold at a lower price, inducing the purchasing druggist, in his own interest, to substitute, as far as he could, the former for the latter. In other words, petitioner sought to avail itself of the favorable repute which had been established for respondent's preparation in order to sell its own. Petitioner's salesmen appeared more anxious to convince the druggists with whom they were dealing that Quin-Coco was a good substitute for Coco-Quinine, and was cheaper, than they were to independently demonstrate its merits. The evidence establishes by a fair preponderance that some of petitioner's salesmen suggested that, without danger of detection, prescriptions and orders for Coco-Quinine could be filled by substituting Quin-Coco. More often, however, the feasibility of such a course was brought to the mind of the druggist by pointing out the identity of the two preparations and the enhanced profit to be made by selling Quin-Coco because of its lower price. There is much conflict in the testimony; but on the whole it fairly appears that petitioner's agents induced the substitution, either in direct terms or by suggestion or insinuation. Sales to druggists are in original bottles bearing clearly distinguishing labels and there is no suggestion of deception in those transactions; but sales to the ultimate purchasers are of the product in its naked form out of the bottle, and the testimony discloses many instances of passing off by retail druggists of petitioner's preparation when respondent's preparation was called for. That no deception was practiced on the retail dealers, and that they knew exactly what they were getting, is of no consequence. The wrong was in designedly enabling the dealers to palm off the preparation as that of the respondent.⁴ One who induces another to commit a fraud and furnishes the means of consummating it is equally guilty and liable for the injury.⁵

The charge of unfair competition being established, it follows that equity will afford relief by injunction to prevent such unfair competition for the future. Several acts of unfair competition having been shown, we are warranted in concluding that petitioner is willing to continue that course of conduct, unless restrained.⁶ It remains to consider the character and extent of this relief.

Respondent has no exclusive right to the use of its formula. Choco-

⁴ *Coca-Cola Co. v. Gay-Ola Co.*, 200 Fed. 720, 119 C. C. A. 164; *N. K. Fairbank Co. v. R. W. Bell Manufacturing Co.*, 77 Fed. 869, 875, 877-878, 23 C. C. A. 554; *Lever v. Goodwin*, L. R. 36 Ch. Div. 1, 3; *Enoch Morgan's Sons Co. v. Whittier-Coburn Co.* (C. C.) 118 Fed. 657, 661.

⁵ *Hostetter Co. v. Brueggeman-Reinert Distilling Co.* (C.C.) 46 Fed. 188, 189.

⁶ *Hennessy v. Wine Growers' Assn.* (D. C.) 212 Fed. 308, 311.

late is used as an ingredient, not alone for the purpose of imparting a distinctive color, but for the purpose of also making the preparation peculiarly agreeable to the palate, to say nothing of its effect as a suspending medium. While it is not a medicinal element in the preparation, it serves a substantial and desirable use, which prevents it from being a mere matter of dress. It does not merely serve the incidental use of identifying the respondent's preparation⁷ and it is doubtful whether it should be called a non-essential. The petitioner or any one else is at liberty under the law to manufacture and market an exactly similar preparation containing chocolate and to notify the public that it is being done.⁸ But the imitator of another's goods must sell them as his own production. He cannot lawfully palm them off on the public as the goods of his competitor. The manufacturer or vendor is entitled to the reputation which his goods have acquired and the public to the means of distinguishing between them and other goods; and protection is accorded against unfair dealing whether there be a technical trademark or not. The wrong is in the sale of the goods of one manufacturer or vendor as those of another.⁹ If petitioner had been content to manufacture the preparation and let it make its own way in the field of open and fair competition, there would be nothing more to be said. It was not thus content, however, but availed itself of unfair means, either expressly or tacitly, to impose its preparation on the ultimate purchaser as and for the product of respondent.

Nevertheless, the right to which respondent is entitled is that of being protected against unfair competition, not of having the aid of a decree to create or support, or assist in creating or supporting, a monopoly of the sale of a preparation which every one, including petitioner, is free to make and vend. The legal wrong does not consist in the mere use of chocolate as an ingredient, but in the unfair and fraudulent advantage which is taken of such use to pass off the product as that of respondent. The use disassociated from the fraud is entirely lawful, and it is against the fraud that the injunction lies. But respondent, being entitled to relief, is entitled to effective relief; and any doubt in respect of the extent thereof must be resolved in its favor as the innocent producer and against the petitioner, which has shown by its conduct that it is not to be trusted. Clearly, the relief should extend far enough to enjoin petitioner, and its various agents, from, directly or indirectly, representing or suggesting to its customers the feasibility or possibility of passing off Quin-Coco for Coco-Quinine. The Circuit Court of Appeals held that petitioner should be unconditionally enjoined from the use of chocolate. We think this goes too far; but, having

⁷ *Coca-Cola Co. v. Gay-Ola Co.*, supra, page 724 [119 C. C. A. 164].

⁸ *Saxlehner v. Wagner*, 216 U. S. 375, 380, 30 Sup. Ct. 298, 54 L. Ed. 525; *Chadwick v. Covell*, 151 Mass. 190, 23 N. E. 1068, 6 L. R. A. 839, 21 Am. St. Rep. 442.

⁹ *Elgin National Watch Co. v. Illinois Watch Co.*, 179 U. S. 665, 674, 21 Sup. Ct. 270, 45 L. Ed. 365.

regard to the past conduct of petitioner, the practices of some druggists to which it has led, and the right of respondent to an effective remedy, we think the decree fairly may require that the original packages sold to druggists shall not only bear labels clearly distinguishing petitioner's bottled product from the bottled product of respondent, but that these labels shall state affirmatively that the preparation is not to be sold or dispensed as Coco-Quinine or be used in filling prescriptions or orders calling for the latter. With these general suggestions, the details and form of the injunction can be more satisfactorily determined by the District Court. The decree of the Circuit Court of Appeals is reversed and the cause remanded to the District Court for further proceedings in conformity with this opinion.

Reversed.

COMMENTARY: This case is one of unfair competition, a branch of the law which lawyers distinguish much more sharply from the infringement of trade-marks and trade names, patents, and copyrights, than business men generally do. It is a frequent occurrence, entirely too frequent, that the business man who has invested heavily in the development of good-will undertakes to defend himself against "infringement" only to learn in the court, if not in the lawyer's office, that he has nothing capable of being infringed upon. The commonest source of this difficulty is the selection of a name that will not for technical reasons be regarded by the courts as a trade name. The greater difficulties of making out a case of unfair competition as well as the limits upon the remedies available are well illustrated in this case.

A somewhat more novel feature of the case is its tacit recognition of the reorganization of business in modern times by the substitution of "independent" middlemen for agents and other employees in the work of distributing products. The law of misrepresentation (under which we may include warranty law, fraud, and unfair competition, as well as some other topics) grew up under a system of doing business in which it was generally quite enough for practical purposes to protect the interests of the immediate buyer, without regard for the possibility or likelihood of resale. Under modern business conditions, courts and legislatures have found it necessary to develop these doctrines to meet the common situation where the real party in interest is a subvendee. In the case before us the defendant argued that the purchasers from him, namely the retail druggists, were in no case deceived. The tacit implication is that he has no relation, contractual or otherwise, with the purchaser from the retail druggist. Courts have negated this tacit assumption by the "dangerous instrumentality" doctrine, by the extension of the general principles of tort law, and in other ways. In this case the situation is squarely met by the declaration that "one who

induces another to commit a fraud and furnishes the means of consummating it is equally guilty and liable for the injury." The principle is not new, but its application in connection with unfair competition in such a case as this is a step forward in the recognition of the actual relation between the producer and his distributing "agencies"—regardless of the technical question whether they are agents or independents.

May, 1926

N. I.

FIRTHCLIFF ELECTRIC COMPANY¹

PUBLIC UTILITY—ELECTRIC LIGHT AND POWER

SALES METHODS—*Bureau Organized by Electric Company to Promote Wiring of Unwired Buildings.* An electric light and power company organized a bureau to promote the wiring of unwired and partially wired buildings in the city. On the basis of a house-to-house canvass, the city was mapped according to districts, with the unwired buildings shown in red. Salesmen, who interviewed the owners of unwired buildings to secure wiring contracts, also assisted the owners in deciding on the number of outlets and switches and on the type of fixtures, and secured bids for the work from contractors. The bureau was successful in substantially reducing the number of unwired and partially wired buildings.

INSTALMENT PURCHASES—*Granted by Electric Company to Secure Wiring Contracts.* An electric light and power company, which was attempting to promote the wiring of unwired and partially wired buildings in its city, allowed those building owners who could not pay cash for a wiring installation to use a deferred payment plan.

(1922)

The Firthcliff Electric Company supplied electric light and power to approximately 400,000 customers in a large eastern city. In 1922 the company planned to develop the sales of its territory by inducing the owners of unwired buildings to have them wired. A survey bureau which had been maintained by the company for several years reported that about 20% of the 72,500 buildings in the city were not wired for electricity, and that about 25% were but partially wired. These 32,500 unwired and partially wired buildings included apartment houses, loft buildings, and 4-story and 5-story residences.

An executive of the Firthcliff Electric Company, after making

¹ Fictitious name used for purpose of disguise.

a careful study of the situation, proposed that the company organize a bureau to promote the wiring of unwired and partially wired buildings. The plan which he suggested provided for the division of the city into six districts, and for the employment in each district of a salesman to make a house-to-house canvass. On the basis of these surveys, the districts would be mapped and the names of all owners of unwired or partially wired houses listed. Sales effort was to be concentrated on unwired buildings first. The salesmen were to interview the owners; the work of the salesmen would be followed up carefully. The district maps would show unwired buildings in red and wired buildings in black. The maps would be kept up-to-date, thus showing where sales effort was needed and where progress was being made.

The plan provided for the separation of the unwired buildings into three classes. Class *A* included buildings for which wiring contracts probably could be secured with little effort; class *B*, buildings for which wiring contracts probably could not be secured easily, because of the unfavorable locations of the buildings; and class *C*, buildings which probably would not be wired because they were in poor condition and soon would be demolished to make room for new structures. The executive proposing the plan recommended that the company continue to solicit the owners of buildings in classes *A* and *B* until the desired contracts were obtained or until it became apparent that they could not be obtained.

A record card was to be kept for each unwired building. Upon the card would be recorded the location of the building; the character of the building; the owner's name and address; whether the building could be connected to the company's service mains readily; whether the building belonged in class *A*, *B*, or *C*; information as to interviews between the company's representatives and the owner; information as to estimates of costs or inspections made by the company's representative; and information as to any wiring contract entered into by the owner. When an owner agreed to have his building wired, the salesman was to assist him to decide upon the number of outlets and switches and the type of fixtures to be installed, and then was to obtain bids for the work from three independent contractors. The owner would award the contract.

If the owner could not afford to pay cash for the wiring installation, he would be allowed to make use of a deferred payment plan. Under this plan the customers upon entering into the contract paid the contractor 10% of the cost of the installation and gave a note to the contractor for the balance, at the same time signing an agreement to pay the balance in 12 monthly instalments. The contractor endorsed the note and assigned the agreement to a bank, which immediately paid the contractor 90% of the unpaid balance. The contractor collected the monthly instalments for the bank and received his final 10% from the last payment. The bank charged from 8% to 11% on the principal, depending upon the amount of the note. The agreement provided that in case of default the contractor could remove the fixtures and wiring. The contractor bore the risk of loss, since he endorsed the notes; any legal measures taken to secure compensation from a defaulter were to be initiated by the contractor.

In the case of rented property, the executive who suggested the plan recommended that the company make an effort to get the tenants to petition the owner to have the building wired, the tenants to agree to pay \$2 or \$3 more rent per month.

The company served a large portion of the city from underground mains. A city law made it impossible for the company for a period of one year after a street was paved or repaved to disturb the pavement for the purpose of making a new service connection. The company, therefore, planned to have its salesmen concentrate their efforts upon the owners of unwired buildings located on streets which were to be repaved soon, and not to solicit owners of buildings located on recently paved streets. The executive estimated that the total annual expense of the proposed bureau, including salaries and overhead, would be \$25,000. The company expected that, if the plan was adopted, 4,000 old buildings would be wired yearly. The average gross annual revenue to the company for the types of buildings which were unwired was approximately \$150 per building.

The company adopted the plan, and, in June, 1922, organized the proposed bureau. The number of unwired buildings was reduced from 14,500 to 6,000 by July, 1924, and to 4,500 by December, 1924. In January, 1924, solicitation of owners of partially wired buildings was commenced, and by December,

1924, the number of those buildings was reduced from 18,000 to 15,000. The company believed that the success of the bureau resulted from the employment of high-grade salesmen, the careful survey of districts, the accurate classification of buildings, and the thoroughness with which salesmen's activities were followed up.

COMMENTARY: The principle of encouraging customers to use the company's service and of suggesting means of assisting them to finance the purchase of equipment and appliances is sound for a regulated gas or electric utility company, although it would be unsound for a coal dealer or an oil company. The latter has no monopoly of the business and his customer, after following his recommendations and perhaps accepting his assistance in financing the installation of a furnace, might buy coal or oil from another dealer. The customer of the utility company cannot do this.

Therefore, provided that the selection of contractors to submit bids to customers was carried out in such a way as not to antagonize other contractors, this house wiring campaign was sound as far as it went. It was apparently incomplete, however. The company should have been prepared to aid the house owner by expert advice as to the standards of wiring and fixtures to be installed. The company should have consulted with the contractors and agreed upon the specifications best suited to various types of new and old houses. The architects in the city should have been induced to specify these standards for new buildings and the speculative builders should have been brought into line. These results can all be achieved with time and patience and they are of real value to the house owner.

May, 1926

P. C.

KINGSTON TRACTION COMPANY¹

PUBLIC UTILITY—STREET RAILWAY

NEW SERVICE—*Established by Traction Company to Forestall Competition.* A traction company which derived 90% of its passenger revenue from an interurban trolley line learned that independent bus operators planned to run a motor bus line parallel to the trolley line. In order to forestall this competition, the traction company decided to operate an express bus service over the proposed route, without reducing the trolley service but coordinating the two services so as to obtain the maximum revenue from each.

(1924)

¹ Fictitious name used for purpose of disguise.

The Kingston Traction Company owned and operated a double-track electric trunk line 41 miles long between Kingston, a city with a population of 175,000, and Westport, a city with a population of 75,000. About 90% of the company's passenger revenue, which amounted to approximately \$850,000 annually, was derived from this line; the balance came from four short branch lines.

During the first six months of 1924, independent bus operators established 10 interurban bus lines from Kingston and Westport to various points. When it became apparent that the state highway from Kingston to Westport, which ran parallel to the Kingston Traction Company's trolley line at a distance of 7 or 8 miles, was soon to be selected as a bus route, an executive of the company suggested that the company forestall competition by obtaining the necessary franchises and operating a Kingston-Westport express bus service. The company, if it established a bus line, would not reduce its trolley service but would endeavor to coordinate the two services so as to obtain the maximum earnings from each.

The intercity trolley fare was \$1.13; 20 cents of this went to street railway companies in Kingston and Westport for trackage rights within the city limits. Special round trip tickets were \$1.95. The rate of fare for local passengers was 3 cents a mile. Twenty per cent of the company's main-line receipts came from through passengers. The average number of through passengers per day was 450. The usual headway on the line was 30 minutes; during certain hours 15-minute service was given over half the route. The scheduled running time was 2 hours, which was slightly more than the time required by local steam trains. Express steam trains made the run in 1 hour and 15 minutes. There were 23 trains a day each way between Kingston and Westport. The railroad fare was \$1.60 for the trip each way.

The schedule proposed for the bus line which the Kingston Traction Company contemplated establishing provided for 12 round trips per day, a 1-hour headway, 2-hour running time, and a through trip fare of \$2. There would be no stops en route. Five 25-passenger, "De luxe" type motor coaches, costing \$10,000 each, would be required. The round trip distance of the proposed route was 85 miles. If the total daily mileage of 1,020

was divided equally between the 5 busses, each bus would average 204 miles a day. The company estimated that the cost per bus per mile traveled would approximate 25 cents. The company's estimate of operating costs is given in detail in Exhibit 1.

It was impossible for the company to determine the number of persons who would use the bus service if it were offered. In order to meet the estimated cost of 25 cents per bus mile, gross receipts would have to average \$265 a day, the equivalent of fares from 133 passengers per day or from 11 passengers per round trip. If

EXHIBIT 1

ESTIMATED COST OF MOTOR BUS OPERATION, COMPUTED BY
KINGSTON TRACTION COMPANY*

Items of Expense	Cost in Cents per Bus Mile†	
<i>Investment:</i>		
Five De luxe type motor busses, complete except tires . . .	\$50,000	
Garage facilities and equipment	2,500	
Total investment	\$52,500	
Investment per bus	10,500	
<i>Fixed expenses per bus per annum:</i>		
Interest on investment, 6%	630	
Taxes at 2%	210	
Insurance, including public liability, property damage, fire, and theft	750	
License and miscellaneous	100	
	\$ 1,690	2.27
Bus operator, at \$40 a week	2,100	2.82
Total	\$ 3,790	5.09
<i>Operating expenses per bus mile:</i>		
Tires, at cost of \$596 (12,000-mile life)	4.97	
Gasoline, at 20 cents a gallon (6.53 miles per gallon)	3.06	
Oil at \$1 a gallon (400 miles per gallon) . . . . .	.25	
Grease and miscellaneous supplies . . . . .	.50	
Maintenance and repairs	4.50	
Depreciation (150,000-mile life)	6.67	
Total cost of operation	25.04	

*The Kingston Traction Company had had no experience with motor bus operating costs. The company's estimates were based upon figures obtained from other street railway companies and from bus manufacturers. Another street railway company which operated in an adjoining territory recently had established a bus route 27 miles long. That company stated that its bus costs were about 30 cents per mile.

†Number of trips per day	12
Total mileage per day	1,020
Total mileage per annum	372,300
Total mileage per bus per annum	74,460
Average mileage per bus per day	204

the actual cost of operation was 27½ cents per bus mile, an average of 12 passengers per round trip would enable the bus line to meet expenses. At 30 cents per bus mile, 13 passengers per round trip would be required. It seemed reasonably certain that on Sundays and holidays and during several of the summer months the line would be able to meet the expected operating costs. It was impossible to forecast how much riding there would be in bad weather and during the winter months.

If the company did not establish a bus line, some independent operator probably would do so. It was impossible to tell what effect a parallel bus line would have on the company's revenue, but it seemed evident that a bus line operated by the traction company in coordination with its trolley service would be less detrimental than one operated independently by a competitor. The company would have to petition the public service commission for authority to operate busses; the steam railroad company undoubtedly would oppose the petition.

The company decided to petition the public service commission for authority to operate the proposed bus line between Kingston and Westport. The company was convinced that it should take this step to protect itself against independent bus competition, even though there was a possibility that its bus operations would not be profitable.

COMMENTARY: The company was confronted with a difficult but common problem. Its trolley line was unprofitable and its traffic declining. The exact cause is not clear. But the fact that more expensive methods of travel, such as the private automobile, were taking away passengers, suggests that the company had made a mistake in attempting to sell its goods upon a price instead of a quality basis. The patrons apparently wanted comfort and were willing to pay for it. The experiment with De luxe busses was worth trying, although the costs were unknown and probably would exceed the estimates. There was an established demand for transportation over the region served, but the company no longer could reach that demand effectively. To preserve its value as a going business, therefore, the company was justified in adding to its equipment a new type of conveyance which promised more effectively to supply the demand.

May, 1926

P. C.

WATERVILLE STREET RAILWAY COMPANY¹

PUBLIC UTILITY—STREET RAILWAY AND MOTOR BUSES

NEW SERVICE—*Motor Busses to Supplement Street-Cars.* A street railway company routed both local and express cars over the same tracks on a city line, to the dissatisfaction of both classes of riders. The company remedied the situation by running only express cars on the tracks and paralleling the street-car line with a motor bus line to carry local passengers. The company had contemplated installing turnout tracks in order to permit express cars to pass local cars, but decided to operate motor busses because it expected that service to be cheaper than street-car operation. The plan was successful in relieving congestion on the line, increasing the speed of express service, and increasing the volume of local traffic.

(1922)

The Waterville Street Railway Company furnished local transportation in Waterville to a population of about 250,000. One of the heaviest traffic routes extended $1\frac{3}{4}$ miles from the center of the city along Third Avenue, a wide, well-paved thoroughfare, to Denby Square, from which 5 lines ran to suburbs. Inbound Third Avenue cars made a loop at the center of the city in order to return. The combined service of the 5 suburban lines required 17 inbound and 17 outbound cars per hour over Third Avenue with an average headway of $3\frac{1}{2}$ minutes. The company added 2 or 3 extra cars during rush hours. Five of the 17 cars carried only through passengers and ran express from Denby Square to the center of the city. The remaining 12 cars carried both through passengers and short-haul passengers. The running time of local cars was 15 minutes; express cars, although scheduled to make the run in 12 minutes, seldom made it in less than 15. It was estimated that the Third Avenue cars carried about 12,500 passengers daily, and that about 60% of them were through passengers.

Residents of the suburban communities beyond Denby Square made persistent demands for more rapid transit to the center of the city; as through passengers they complained chiefly of the number of stops made by local cars for short-haul passengers. Local passengers complained that they often were obliged to stand during inbound trips because the through passengers occupied the seats. Since the situation was not likely to improve

¹ Fictitious name used for purpose of disguise.

without some action from the company, in 1923 the executives asked the transportation department to devise a plan by which the company could separate through and local traffic on Third Avenue and could increase the rapidity of both services.

The traffic department then prepared two plans. The first provided for the construction of passing tracks, or turnouts, at two points between the center of the city and Denby Square, at which express cars could pass local cars. The company used this system successfully on other lines; on one of them the company had reduced the running time for express service from 27 minutes to 18 minutes. The traffic department estimated that, if the company constructed the turnouts, it could arrange the schedules of the 5 lines routed via Third Avenue so that it could reduce the running time of express cars to 11 minutes.

The other plan was to institute motor bus service on Third Avenue in place of the local trolley cars. All the cars then would run express between Denby Square and the center of the city, stopping inbound only to discharge passengers and outbound only to receive passengers. In order to discourage through passengers from using the local busses, the company proposed to locate the outbound bus terminal at a point about 1,000 feet short of Denby Square, if the executives accepted this plan. The traffic department estimated that the local traffic would require the operation of busses on 5-minute headways during off-peak hours and on 2½-minute headways during rush periods. This service would require 8 busses, because the state law permitted busses to carry no more than a seated load. Under this arrangement, the company could reduce the number of cars using the Third Avenue tracks from 17 to 11 per hour. Since all these cars would run express, the traffic department believed that it could reduce the running time from 15 minutes to 10 minutes. The company contemplated no change in fares.

The estimated expense of the track turnouts and the overhead construction involved was between \$16,000 and \$20,000. The alternative plan required an investment in busses of about \$52,000. The company's average net expense was about 24.5 cents per mile for bus operation and about 32.9 cents per mile for electric car operation. Since the seating capacity of busses was 25 and of cars 44, the average expense per seat mile was .98 cents

for bus operation and .75 cents for car operation. These were average expenses and might not apply exactly to the Third Avenue situation; but because the largest single operating expense was for labor, and because a bus required one man and a car two for the Third Avenue service, it was probable that the operating expense per bus would be less than the operating expense per car. A further advantage of introducing busses was the fact that the decrease in the running time and the reduction in the number of cars per hour on the Third Avenue line would release several cars for service elsewhere on the system.

The company decided, therefore, to install bus service. The company purchased 8 motor busses and put them into operation in May, 1923. Eleven trolley cars per hour as compared with 17 per hour operated between Denby Square and the center of the city; all these cars were express. The running time was 10 minutes. In spite of frequent stops, the average speed of bus operation along Third Avenue, not including the loop district, was slightly over 10 miles per hour. Express cars averaged 16 miles per hour through this territory. Local passengers were separated effectively from through passengers. Traffic increased so that it was necessary for the company to purchase 2 additional busses. There were 7,013 scheduled seats on the busses both ways each day; the number of passengers averaged 5,500 as compared with the estimated figure of 5,000 formerly carried on local street-cars.

COMMENTARY: This case is a good example of the coordination of street railway and bus service; it shows that such coordination is obtained more readily when both forms of transportation are under one control rather than under divided control between competing agencies. The city transportation problem should be handled as a unit. Control, therefore, ought to be concentrated in strong hands acting under the direction of public officials who will see the problem in the large and not as a conflict between the interests of the various forms of transportation, other businesses, the car riders, and the general public.

October, 1925

T. H. D.

MACE GAS & ELECTRIC COMPANY¹

PUBLIC UTILITY—GAS AND ELECTRICITY

ACCOUNTING—*Billing and Indexing System Revised.* A gas and electric company, because it believed it could effect a yearly saving of from \$150,000 to \$300,000 by doing so, revised the system under which it indexed customers' meters during nine days of each month and billed customers on the first three days of the month, by providing for continuous indexing and billing, and, further, for the use of a combined bill for gas and electricity to customers using both, and for the use of mechanical billing machines. The estimated saving would result from reductions in the quantity of billing and accounting forms, stationery, and postage needed and from a reduction in the accounting and billing labor forces.

BILLING—*Change in Time of, in Spite of Deferred Revenue.* A gas and electric company having about 1,000,000 customers decided to adopt a system whereby it would index customers' meters and bill customers continuously throughout the month. The change from the former method, under which the company did all its monthly indexing during nine days of the month and all the billing during the first three days of the month, would involve indefinitely deferred revenue amounting to about \$907,000, because during the months when the changes were made customers would be billed for an average period six days shorter than usual. The change, however, would effect a gain in interest, if, as the company expected, collection as well as billing was continuous, sufficient to amortize this amount in five years.

(1924)

The Mace Gas & Electric Company supplied gas and electric light and power in a large section of a north-central state. The company had 600,000 gas meters and over 400,000 electric meters in service; the company kept approximately 1,000,000 customer accounts and issued an equal number of bills. About 360,000 customers used both gas and electricity. Early in 1924, the Mace Gas & Electric Company examined a plan which provided for continuous indexing and billing throughout the month and for the use of a combined bill for gas and electricity.

This company was prosperous, and expected that its rapid growth during the preceding decade would continue. In 1923, the gross revenue from the sale of gas and electricity had been \$56,000,000. Approximately \$3,000,000 had been added to surplus in that year.

The company's territory was divided into six districts. Bills

¹ Fictitious name used for purpose of disguise.

were made out and customers' accounts kept at the district offices. All gas and electric meters were indexed each month during the nine-day period beginning four working days before the twenty-first and continuing four working days after. Gas meters and electric meters were indexed separately, although the routes arranged for the indexing of these two sets of meters covered about the same areas. The meter index sheets were delivered to the district billing departments about the twenty-fifth of each month, and separate bills for gas and electricity were made out manually in the following nine days. Bills were mailed to customers from the first to the fourth of each month, and were due and payable upon presentation. Although no discount was allowed for prompt payment and no penalty was imposed for delayed payment, collections were satisfactory; approximately 80% of the bills were paid the same month they were rendered. Statements of delinquent accounts were accompanied by notices urging payment; service usually was discontinued if a bill was unpaid after the third notice.

The average day for meter indexing was the twenty-first of the month. There was an average lapse of 11 or 12 days, therefore, between the time when a meter was indexed and the time when the bill was delivered to the customer. Under this method of billing, most of the work of the billing departments necessarily was performed during the last few days of each month. Each ledger account, which was posted every month, contained the following data: sales entries; account number; meter number; size of meter; dates upon which the meter was set, removed, transferred, and reconnected; dates during which the meter was inactive; purpose for which premises were used; customer's name; date service was begun; security for credit; gas or electric rate; minimum charge; locations of meter; dangerous conditions for the reader, such as the necessity of using unsafe stairways in approaching the meter; quantity of gas or electricity consumed; and the meter constant. Customers' inquiries and complaints were answered from the data contained in the ledger accounts. The combined cost of gas and electric indexing and billing was approximately \$2,500,000 per year.

Under the proposed plan, meters were to be read during the 21 full working days of each month. Saturday half-days were to be devoted to the checking of errors and to the indexing of

meters which could not be read on other days. Routes would be arranged so that each meter would be read on the same date of every month. One man was to read both the gas and electric light meters included in a given area. The meter reader, furthermore, was to compute the quantity of gas or electricity that each customer whose meter he had indexed had used during the current month. The meter reader was to do this by subtracting the reading for the preceding month from that for the current month. He would enter these data and similar data for the preceding month and for the corresponding month of the preceding year on the customer's index sheet.

The meter index sheets were to be sent to the central office on the same day in which they were made out. If a customer purchased both gas and electricity, the readings and charges for both were to be entered on the same bill. Each bill was to be prepared on a mechanical billing machine which printed the days on which the customer's meter or meters were read, the readings, the quantity of gas, electricity, or both, which had been consumed, and the amount of the charge. The bill form would consist of a bookkeeping coupon, a customer's statement, and a cashier's coupon. Parallel entries were to be made on the three portions; the bookkeeping coupon was to be sent to the district office and kept there as the customer's account; the statement and cashier's coupon were to be sent to the customer; the cashier's coupon was to be returned with the payment; and then the cashier's coupon, bearing the date of payment, was to be sent to the bookkeeper, who was to cancel the account. Customers' ledger accounts would be discontinued. Bills were to be sent out continuously three days after the indexing of the meters to which the bills pertained. The rate schedules were to be printed on the forms sent to customers in order that they might check the amounts of their bills.

It was proposed that cash registers be used in the district offices for the receipting of bills. When bills were paid by cash, the bookkeeping coupons corresponding to the cashier's coupons that were returned with the cash, were to be extracted from the unpaid bills file. The cash receipts would be posted from the bookkeeping coupons. One account for accounts receivable was to be kept at the general office.

The estimated cost of materials and equipment required under the proposed plan was as presented in Exhibit 1.

EXHIBIT 1

ESTIMATED COST OF MATERIALS AND EQUIPMENT REQUIRED BY THE
MACE GAS & ELECTRIC COMPANY FOR THE OPERATION OF A
CONTINUOUS AND COMBINED BILLING PLAN

Quantity	Materials and Equipment	Cost
3,500	Binders and containers for ledger records	\$ 25,500
50	Billing machines complete	59,828
50	Cash registers	26,000
Total		\$111,328

The company estimated that the operation of the suggested plan would require an expenditure of \$111,328 for materials and equipment. The company expected that it would save, however, about \$150,000 during the first year if it adopted the plan and \$300,000 yearly thereafter. This estimated saving would result from reductions in the quantity of billing and accounting forms, stationery, and postage needed as well as from a 40% reduction in the accounting and billing labor forces.

Another company, which had installed a system similar in principle to the one which the Mace Gas & Electric Company was reviewing, had changed 40,000 accounts per month to the new system. At that rate, the Mace Gas & Electric Company would require approximately two years to transfer its accounts. The company believed, however, that, because of the comparative simplicity of its plan, it could make the changes in four months.

The average day for indexing under the new plan would be the fifteenth of the month. Under the existing method, the average indexing day was about the twenty-first. During the months when the changes would be made, if the plan were adopted, customers would be billed for a period six days shorter, on an average, than usual. Although bills in subsequent months would be normal, six days' revenue from each customer would be deferred indefinitely. It was estimated that the deferred revenue would amount to \$907,000. It was pointed out, however, that this amount could be amortized over a five-year period.

Continuous billing probably would result in continuous collections. Under the proposed system, the average day for the mailing of bills to customers would be the eighteenth of the month in which the meters were read. Under the current system, bills were sent out between the first and fourth days of the month following the one in which the gas or electricity was used. If the company adopted the new plan, and if customers made payments as promptly as they had formerly, the company would receive returns from the bills at least 12 days earlier. There would be a gain in interest, therefore, of 12 days each month on the average monthly billings, which, in 1924, were estimated at \$5,200,000. At 8% per annum this gain would be approximately \$164,000. This amount would be sufficient to amortize the deferred revenue in five years.

During the period of change it would be necessary to duplicate records and to use special forms for balancing. The billing clerks, furthermore, probably would object to the extra work, particularly since the company was likely to reduce their number after the installation of the new system.

The new plan would not interfere with the classification of accounts prescribed by the public service commission, and this body was not likely to object to the arrangement.

The company decided to install the new indexing and billing system, because of the savings which would result. The company tested billing machines made by three manufacturers and selected one on the basis of performance. The executives decided to have the new meter index sheets used for a month before the company made the change in billing, in order to check meter locations and addressograph plates.

The meter index sheets which had been filled out during any one day were sent by express or special messengers from the local offices to the central office at the end of that day. The day after a sheet was received, bills were made out from it, and during the second day amounts of sundry sales, of instalments due on conditional sales, and of delinquent accounts were placed on the bills. The bills were mailed to the customers on the morning of the third day. The number of accounts assigned to each clerk was increased, because of the simplified methods of posting and balancing.

Explanatory stickers were sent with the bills one month prior

to the change, and also with the first and second bills rendered to each customer after the change was made. These stickers explained the change in method of reading meters, delivering bills, and keeping accounts, and also the reason for the facts that bills were sent out earlier or later than customary and that the amounts varied from the usual charges. The customers accepted the new method as an improvement; the company experienced no difficulty in explaining the advantages of the plan to them.

COMMENTARY: This system of continuous meter reading and billing by gas and electric companies has now become general. It was made necessary by the multitude of small customers whose individual accounts required billing and collecting costs which formed a large percentage of the individual total sales. To economize further, some companies are now experimenting with bimonthly billing to these customers.

May, 1926

P. C.

PARKDALE NATIONAL BANK¹

BANK CREDIT—*Reduction in Line of Credit Extended Customer.* The credit manager of the bank decided gradually to reduce the line of credit which the bank for four years had extended to a company selling restaurant cooking apparatus. This decision was made on the grounds that: other creditors of the company reported that it was slow in meeting its obligations; the customer was negligent in supplying the bank with information as to its financial condition; the customer had failed to observe the bank's request to liquidate the loan completely once a year; the customer's net profits had declined substantially, apparently because the two managers were receiving excessive salaries.

(1924)

From 1920 to 1924, the Parkdale National Bank had extended a line of credit of \$27,000 to the Chesterton Company¹. That company had used this line of credit continuously, not liquidating its loan completely at any time. In January, 1924, when the company requested a renewal of its note for \$9,000, the bank investigated the company's financial condition in order to determine the advisability of continuing the line of credit.

The Chesterton Company was formed in 1905 to sell and install hotel and restaurant cooking apparatus. The authorized capitalization of the company was \$90,000 of \$100 par value

¹ Fictitious name used for purpose of disguise.

common stock, of which \$88,000 had been issued by the end of 1923. The company's products included stoves, ranges, ovens, ice-boxes, sinks, and kitchen utensils and crockery. Its store was neat in appearance and was excellently located in the downtown district of an eastern city. The company owned and operated a small factory for the manufacture of its stoves and ranges but purchased most of its merchandise from other manufacturers. Nearly all these purchases were made on credit terms of 2% 10 days, net 60 days. About 80% of the company's sales were made to large corporations which managed hotels and restaurants. On its sales, the company usually extended credit for six months.

In 1920 the Parkdale National Bank granted a line of credit of \$27,000 to the Chesterton Company. That company used this credit in meeting its accounts payable, since it extended a longer credit allowance on its sales than it received on its purchases. In 1920 the company was well organized, had a reputation for paying its accounts promptly, and was recognized as one of the leaders in supplying hotel and restaurant equipment. The credit manager of the bank was of the opinion that the amount of capital invested in the Chesterton Company was small in view of the sales of the company and the long credit period which it allowed, but, with this exception, he was satisfied with its financial statement. The notes which the company gave the bank under this line of credit were endorsed personally by the owners of the company.

From 1920 to 1924, the Chesterton Company used its entire line of credit continuously, renewing its notes with the bank at intervals of four months. During that period, although the company's sales increased, its net profits declined markedly, as indicated in Exhibit 1.

EXHIBIT 1

ANNUAL SALES AND NET PROFITS OF CHESTERTON COMPANY,
1920-1923

Year	Sales	Net Profits
1920	\$852,227.75	\$23,913.07
1921	869,603.71	15,494.87
1922	859,998.38	7,171.38
1923	943,534.78	6,221.59

In January, 1924, because the company had used the full line of credit constantly, even exceeding it by \$1,800 in 1923, the bank made an analysis of the company's financial statements for the three preceding years. The company's balance sheets as of December 31, 1921, 1922, and 1923, are shown below.

Although the sales of the company had increased, there had been no improvement in the relations of the balance sheet items. The bank considered the financial position of the Chesterton Company as shown by its balance sheets and financial statements satisfactory, although the ratio of current assets to current liabilities of 1.83 to 1 was small in view of the long-time credit extended by the company and the short time granted on its accounts payable.

CHESTERTON COMPANY

Comparative Balance Sheets for Years Ending December 31

ASSETS	1921	1922	1923
Cash.....	\$ 5,899.12	\$ 8,271.59	\$ 12,283.02
Bills Receivable.....	7,577.17	7,120.98	4,045.72
Accounts Receivable.....	101,640.47	146,968.44	151,122.56
Merchandise.....	131,336.66	141,404.74	147,817.15
Total Current Assets.....	\$246,453.42	\$303,765.75	\$315,268.45
Machinery and Fixtures.....	10,708.47	10,381.81	10,174.61
Patents.....	4,470.57	4,294.42	4,113.96
Prepaid Expenses.....	1,229.40	1,247.94	2,653.63
Investments.....	3,972.60	2,160.00	2,160.00
Accidents Reserve for Employees...			315.00
Other Assets.....	7,964.48	5,619.29	4,638.22
Total Assets.....	\$274,798.94	\$327,469.21	\$339,323.87
LIABILITIES	1921	1922	1923
Bills Payable—Merchandise.....	\$ 5,081.56		
Bills Payable to Banks.....	30,600.00	\$ 58,446.00	\$ 59,625.00
Bills Payable—Other.....	2,610.92		
Accounts Payable.....	46,574.69	83,075.42	90,171.84
Reserved for Taxes.....		729.00	360.00
Reserved for Officers and Stockholders.....	16,200.00		
Accrued Salaries and Bonuses.....	24,355.37	24,279.01	21,782.45
Total Current Liabilities.....	\$125,422.54	\$166,529.43	\$171,939.29
Capital Stock.....	73,800.00	84,400.00	88,000.00
Surplus and Undivided Profits.....	75,576.40	76,539.78	79,384.58
Total Liabilities.....	\$274,798.94	\$327,469.21	\$339,323.87

On the other hand, an investigation which the bank made among the other creditors of the Chesterton Company revealed that that company was failing to meet its financial obligations satisfactorily. About three-fourths of the creditors interviewed reported that the company was slow in meeting its obligations. A number stated that from 1920 to 1924 the company frequently had allowed its accounts to become from 30 days to 60 days overdue.

The bank had difficulty in obtaining from the Chesterton Company the full financial information customarily required of all the bank's borrowers. The company at times either failed to return the information blanks sent to it by the bank, or returned the blanks without profit and loss statements or without sales figures.

The company had borrowed from the Parkdale National Bank steadily for four years without observing the bank's request that the company completely liquidate its loans from the bank at least once each year. Moreover, although the bank usually required a customer to maintain a balance of 20% of its line of credit with the bank, the balance maintained by the Chesterton Company had averaged since 1921 but slightly more than 10% of its line of credit.

Finally, the bank discovered that the decline in the net profits of the Chesterton Company was the result of the excessive amounts which the two owners were receiving in salaries. The former manager had died in December, 1922, and had left his sons, who apparently lacked the business judgment of their father, in complete control.

The credit manager of the Parkdale National Bank wished to continue the line of credit extended the Chesterton Company. That company was one of the leading suppliers of restaurant and hotel equipment and had been a good customer of the bank. The credit manager was convinced, however, that the company was no longer a legitimate credit risk. He decided that the bank might have overlooked any one of the unfavorable features of the company's position as shown by the investigation, but that the combination of unsatisfactory features made a reduction of the company's line of credit advisable. He demanded payment, therefore, on the \$9,000 note which the company had asked to have renewed, although he agreed to allow the other notes which

the company had given the bank under the line of credit, to run to maturity. In April, 1924, when another of the notes matured, he requested payment of one-third of the note's face value. He intended to continue this gradual reduction of the amount of the notes due the bank until the Chesterton Company's account was closed completely.

COMMENTARY: In deciding whether to extend the requested credit, the Parkdale National Bank made its decision not on the immediate situation but on the probable future course of the Chesterton Company. An examination of the balance sheets and other data indicates that over a two-year period the current ratio had decreased, bills payable and accounts payable had doubled, sales had increased only one-tenth, net profit had decreased, and the company had come to rely more and more on outside capital. Although the existing conditions might have warranted the renewal of the loan, the available information indicated that in the future the Chesterton Company would be in a still less favorable position. The fact that the bank had difficulty in obtaining the full financial information it desired added to the suspicion that the company was not in a sound position. Under those conditions, the bank was justified in taking steps to protect its loan before the situation became worse.

Refusal to renew the note for \$9,000 would not seriously cripple the company. The amount was comparatively small in relation to the total business transacted, and the company apparently had other bank connections to which it could turn for financial assistance. The credit manager decided correctly that the company was no longer a sound credit risk. He not only protected the bank through refusal to renew the loan, but he also performed a service to the company by calling the attention of the management forcibly to the fact that the company was not in a sound position and that it should take steps to change its methods of operation.

June, 1926

C. E. F.

TRUXFORD NATIONAL BANK¹

BANK CREDIT—*Extended to Firm Because of Ability and Honesty of Members.* A firm of wool merchants with a line of credit with this bank asked for additional credit to enlarge its volume of business. Although, according to the rules which the vice-president in charge of credits for the bank ordinarily followed, the financial condition of the firm would

¹ Fictitious name used for purpose of disguise.

not permit the extension of the additional line of credit requested, the vice-president decided that the character, industry, and ability of the firm members justified such an extension.

BANK CREDIT—*Rules Followed by Bank in Extending Credit to Wool Merchants.* The vice-president in charge of credits for a bank had formulated arbitrary rules which he ordinarily followed in determining the amount of credit to be extended to wool merchants. For this purpose, he divided wool merchants into three classes according to their length of time in the business, their degree of success in operation, and their current financial condition.

(1925)

The Truxford National Bank had capital and surplus, including undivided profits, of \$3,000,000, and deposits of \$10,000,000. The bank did a general banking business and loaned, among others, to companies in the leather, textile, and wool industries. In January, 1925, a firm of wool merchants which had a line of credit of \$25,000 with the bank asked for additional credit of \$25,000; the firm wished to enlarge the volume of its business.

From his experience, the vice-president in charge of credits for the Truxford National Bank had formulated certain somewhat arbitrary rules which he used as a guide in determining the amount of credit to be extended to wool merchants. In applying these rules, he took into consideration the ability and character of the merchants. The rules were based upon the division of wool merchants into three classes.

The class which the vice-president accorded the highest credit standing consisted of those merchants who had been successful in the wool business for a long period, including years of depression as well as years of prosperity. According to the vice-president's standard, success lay in earning an average annual net profit of about 3% of sales and maintaining an average ratio of current assets to current liabilities of at least two to one. The vice-president believed that such merchants were entitled to lines of credit amounting to from 2 to $2\frac{1}{4}$ times the capital they themselves had invested in the business. He stated that ordinarily the price of raw wool did not fluctuate over 30% within any 6 months' period. Thus, the normal fluctuations could take place in the value of the wool in the merchant's warehouse without impairing the security of the bank loan.

In the second class, with somewhat lower credit standing, the vice-president placed merchants who had had experience in the wool industry, possibly as employees of wool merchants, and who had been successful while operating as merchants, but who had not shown ability to operate successfully in exceptionally bad years. The vice-president believed that such merchants should be allowed credit equal to from 1 to 1½ times the amount of capital which they themselves had invested in their businesses.

In the third class were wool merchants who had been unsuccessful in the operation of their firms or who had been wool merchants for less than five years. The vice-president usually allowed a firm of merchants in the third class a line of credit which, with credit allowed them by other banks, gave them a total line which was less than the amount of capital which they had invested in the business, frequently only one-half of that amount.

Blake & Turnbull² was a firm of wool merchants whose members, 56 and 42 years of age respectively, had been engaged in buying and selling wool since they first entered business. The price decline of 1920 had caused them heavy losses. In 1921 the Truxford National Bank and the Osgood Trust Company² had saved the firm from bankruptcy by their each extending it a line of credit of \$25,000. The same credit had been extended during 1922, 1923, and 1924. During short periods, however, the firm's borrowings had been as much as \$35,000 from each of the two banks. In January, 1925, Blake & Turnbull asked the Osgood Trust Company, as well as the Truxford National Bank, to increase the line of credit extended to \$50,000.

Blake & Turnbull's gross sales had been: \$356,522 in 1921; \$681,002 in 1922; \$728,230 in 1923; and \$1,056,774 in 1924. The firm's comparative balance sheet as of December 31 for the five years 1920 to 1924 is shown on the opposite page.

On December 31, 1924, the firm's inventory of raw wool, in dollars, was higher than it had been at any previous time. The Truxford National Bank believed that the current high price of wool was partially responsible for this and did not consider the inventory excessive. In the years 1921, 1922, 1923, and 1924, the firm's average net profits had been about 2.54% of sales.

² Fictitious name used for purpose of disguise.

COMPARATIVE BALANCE SHEET OF BLAKE & TURNBULL,
DECEMBER 31, 1920 TO 1924

ASSETS	Dec. 31, 1920	Dec. 31, 1921	Dec. 31, 1922	Dec. 31, 1923	Dec. 31, 1924
Cash	\$ 8,065	\$ 7,135	\$ 10,501	\$ 22,222	\$ 13,294
Accounts Receivable....	2,811	30,562	40,719	26,172	159,391
Merchandise.....	36,666	24,082	71,247	56,152	72,735
Quick Assets.....	\$47,542	\$61,779	\$122,467	\$104,546	\$245,420
Machinery and Fixtures	613	613	613	3,749	3,172
Deficit.....	13,372	4,057			
Total.....	\$61,527	\$66,449	\$123,080	\$108,295	\$248,592
LIABILITIES					
Bills Payable for					
Borrowed Money....	\$55,000	\$36,000	\$ 38,000	{ \$ 77,430	\$ 70,000
Accounts Payable....	6,527	30,449	54,204		120,214
Current Liabilities.	\$61,527	\$66,449	\$ 92,204	\$ 77,430	\$190,214
Net Worth.....			30,876	30,865	58,378
Total.....	\$61,527	\$66,449	\$123,080	\$108,295	\$248,592
Net Quick Assets.....	\$47,542	\$61,779	\$122,467	\$104,546	\$245,420
Current Liabilities.....	61,527	66,449	92,204	77,430	190,214
Excess Quick Assets			30,263	27,116	55,206
Ratio.....	.77	.94	1.33	1.35	1.29

Its current ratio, however, had been decidedly less than two to one. The vice-president of the Truxford National Bank was aware that, according to the rules he ordinarily followed, the condition of Blake & Turnbull, as indicated by the balance sheets, did not justify his bank in conjunction with the Osgood Trust Company in extending credit which was equal to twice the amount of money invested in the business by the members of the firm. The firm's failure in 1920 would place Blake & Turnbull in the third class of wool merchants recognized by the vice-president. Its successful operation during the poor year of 1923, however, led the vice-president to place it in the second class. The vice-president believed that, judged by his customary standards, the firm was entitled to total bank credit of \$70,000.

The vice-president was convinced, however, that the firm's improvement from December 31, 1920, to December 31, 1924, demonstrated exceptional ability and industry on the part of the management and warranted consideration. On December 31, 1920, the balance sheet of the firm showed it to be in bankruptcy with a deficit of \$13,372. The personal resources of the partners at that time had not been sufficient to meet the firm's debts. The partners had asked that their credit be extended until such a time as they could repay the banks in full. Mr. Blake and Mr.

Turnbull, each of whom had been drawing a salary of about \$8,000 annually, had reduced their salaries to \$50 a week each. They also had reduced their office expenses to a minimum and during the next four years had worked industriously to put their firm in a strong financial position.

The vice-president decided that the character of the partners, as demonstrated by their attitude in 1920, and their industry and ability as shown by the improvement of the firm in the preceding four years, justified the Truxford National Bank and the Osgood Trust Company each in extending the firm credit of \$50,000. The vice-president of the Truxford National Bank conferred with the vice-president of the Osgood Trust Company and both agreed to extend the credit asked for by Blake & Turnbull.

COMMENTARY: A line of credit is a continuing arrangement between the bank and the borrower, and should therefore be based upon the probable course of a business over a period of time rather than upon present ability to liquidate indebtedness as indicated by the balance sheet and other information. Evidently in this case, in deciding to increase lines of credit, the two banks were largely influenced by the improvement shown in the condition of the business during the four preceding years, since its financial position in 1925 was hardly such as to warrant the increase. On the other hand, it may be questioned whether it was advisable at the beginning of 1925 to extend additional credit to wool merchants in view of the unpromising position of most branches of the textile industry at that time.

June, 1926

O. M. W. S.

MIDWEST COMPANY¹

MANUFACTURER—RUBBER BOOTS AND SHOES

BANK CREDIT—*Supplemented by Open Market Borrowing.* The company, which manufactured rubber boots and shoes, maintained lines of credit at five banks, using part or all of its lines of credit almost continually. In 1924 the company decided to borrow in the open market for a time, to liquidate its current borrowings in the banks, and to maintain credit lines at its banks equal to the full amount of its open market borrowings. This action was expected to improve the company's credit standing.

(1924)

¹ Fictitious name used for purpose of disguise.

The Midwest Company of St. Louis, Missouri, manufactured rubber boots and shoes and sold them to retailers and wholesalers. The company's net worth was in excess of \$700,000, and its sales approximated \$3,000,000 per annum. About one-third of its production was sold to retailers on discount terms of 1%, 30 days. The company billed goods sold to wholesalers during the first six months of the year as of July 1 and goods sold from July 1 to December 12 as of December 15. It allowed discounts of 1% per month for payments in anticipation of datings. In spite of the company's liberal discounts, however, its receivables usually reached marked peaks in June and December and the turnover rate for receivables was slow.

The Midwest Company had deposits in five banks, three of which were in St. Louis, one in Chicago, and one in New York. The company usually had maintained lines of credit which aggregated \$350,000 at these banks. This necessitated a total average cash balance of \$70,000, which was about twice the amount needed to finance the company's actual current expenditures. In the first part of 1924, a commercial paper broker solicited the account of the company.

Partly on account of the seasonal peaks of its receivables and partly on account of the business cycle, the company used part or all of its lines of credit most of the time. It always had been able, however, to liquidate its notes payable at least once each year. The president was confident that if the company borrowed in the open market for some time and called on its banks only for small amounts for short periods, its credit standing both with the banks and with companies from which it purchased raw materials would be improved appreciably.

A better credit position usually was required of companies borrowing in the open market than banks required of customers to whom they extended lines of credit. In order to borrow in the open market, a company had to show a satisfactory balance sheet. In addition, commercial paper brokers usually required a detailed list of receivables from the borrower, in order to ascertain whether its current assets were liquid.

Commercial paper brokers usually tried to distribute their paper in as many localities as possible. If the company sold its notes in the open market through the commercial paper broker, therefore, and paid those obligations promptly, it would tend to

build for itself a wide and reliable market for borrowing among the purchasers of its paper, each of whom probably would have investigated the company's financial position. Such a market would safeguard the company's interests in periods of local depression and would facilitate its obtaining any funds it might need for expansion.

The company, if it borrowed in the open market, might find difficulty in times of nation-wide money stringency in liquidating the paper which it had placed in the market. The company could obviate this danger, although it would not be required to do so, by maintaining credit lines at banks to the full amount of the outstanding paper. If the company did this, the banks would require it to maintain an average cash balance of at least one-fifth of the amount of its lines of credit, or twice the amount of its current cash requirements. The cost of maintaining the extra cash balance, which would be equal to one-tenth of the company's open market borrowings, would be reduced by any interest which the banks paid on the deposit. Ordinarily such interest was about 2% per annum on average net deposits.

Early in 1924, the Midwest Company was able to borrow money at $4\frac{1}{2}\%$ per annum in the open market on six months' paper. The broker's commission was $\frac{1}{4}$ of 1%. The bank rate at the time was 5% per annum. The company's balance sheet as of March 31, 1924, was as shown on the opposite page.

The company, if it did its borrowing in the open market and, at the same time, maintained bank credit equal to the amount of its open market borrowing, would be in a safe financial position, having two distinct fields from which to draw funds if necessary. On the other hand, if the company followed this policy, its costs for financing would be reduced little if any. Moreover, in years like 1924, when commercial banks were experiencing difficulties in placing their loanable funds, those banks might not regard favorably a company which placed its paper on the open market. The president of the Midwest Company regarded the extra cost which the company would incur, if it maintained cash balances at the banks equal to twice its actual cash requirement, as an insurance premium against financial embarrassment such as might occur in a period of nation-wide depression.

In April, 1924, the company decided to borrow \$350,000 in the open market, to liquidate its current borrowings in the banks,

BALANCE SHEET OF MIDWEST COMPANY AS OF MARCH 31, 1924

ASSETS			
Cash.....	\$ 58,000		
Accounts Receivable.....	308,000		
Notes and Acceptances Receivable.....	2,000		
Merchandise (raw materials, process, and finished goods).....	<u>314,000</u>	\$ 682,000	
Machinery, Equipment, and Trucks.....		406,000	
Good-Will and Patents.....		I	
Prepaid Expenses.....		<u>15,000</u>	
Total.....		\$1,103,001	
LIABILITIES			
Current Liabilities			
Notes Payable.....	\$121,000		
Accounts Payable.....	115,000		
Rubber Drafts and Acceptances Payable.....	44,000		
Accrued Wages.....	15,000		
Accrued.....	<u>12,000</u>	\$ 307,000	
Capital Stock			
Preferred.....	\$265,000		
Less that held in treasury.....	<u>31,000</u>	\$234,000	
Common.....		<u>338,000</u>	
		572,000	
Reserves.....		73,000	
Surplus.....		<u>151,001</u>	
Total.....		\$1,103,001	
Contingent Liabilities.....\$75,000			

and to maintain lines of credit equal to the full amount of its open market borrowings. To the president, the flexibility afforded by borrowing in two fields and the higher credit rating which he expected the company to have as a result of its action outweighed the fact that no reduction of actual current expenses was effected.

COMMENTARY: The decision of the Midwest Company to borrow on the open market and at the same time to maintain bank credit equal to the amount of its open market borrowings was sound. In a period of prosperity notebrokers solicit companies to engage in open market borrowing. In a period of depression, when country banks have no additional loanable funds, however, it is difficult for notebrokers to sell commercial paper. Consequently, except in the case of a temporary local depression, it would be necessary for the Midwest Company to turn to the banks for all or at least a large part of its borrowings during a period of dull business. Reputable notebrokers frequently require that the companies whose paper they sell have sufficient lines

of credit open with the banks to meet open market paper when it becomes due.

By borrowing on the open market a company makes sure that it is paying at least no more than the going rate of interest. Country banks experiencing difficulty in placing their loanable funds frequently are willing to purchase commercial paper bearing a somewhat lower rate of interest than regular bank loans. At the same time, commercial banks wishing to hold a customer's account may be induced to offer a lower rate than they would otherwise, if the company from time to time resorts to open market borrowing. Although the case states that the Midwest Company would reduce its costs for financing but little through resorting to notebrokers, the fact that commercial banks were experiencing difficulties in placing their loanable funds might induce them to offer the Midwest Company more favorable terms.

The hope of the Midwest Company to establish a wide and reliable market for borrowing from the purchasers of its paper should not be given too great prominence, in view of the size of the issue and the fact that this was the first time the company had utilized this source of loans. It was probable, however, that the ability of the Midwest Company to pass all requirements of the notebroker for open market borrowing would in the long run raise its credit standing with the banks and enable it to secure better service.

There is a point which does not come up in this case but which has an important bearing in the case of a small company. A concern which is so small that it does not have men on its staff with adequate financial training should resort to bank loans in order to obtain the benefit of the bankers' financial advice on all its problems. In such a case, a company should continue to borrow from the banks even though it might secure a slight temporary gain from resorting to open market borrowings during a period of prosperity.

June, 1926

C. E. F.

CITY OF CAMBRIDGE, MASSACHUSETTS

PURCHASE OF EQUIPMENT—*Financed by Issue of Bonds or by Current Revenue.* In 1925 it was necessary for the city of Cambridge, Massachusetts, to purchase departmental equipment with an estimated service life of from one to five years. A few members of the city council believed that the purchase of equipment with a short service life should be considered a current operating expense and paid for from the current tax levy. The city council voted, however, to finance the purchase of the equipment by an issue of serial bonds, to be retired within five years,

since payment for the equipment from the current tax levy would necessitate a substantial increase in the tax rate.

(1925)

Cambridge, Massachusetts, is governed by a mayor and a city council of 15 members all of whom are elected for terms of 2 years. In 1925 the mayor recommended to the city council for approval an appropriation of \$125,000 for the purchase of equipment for the various city departments. The equipment, which had an estimated service life of from one to five years, included apparatus for the fire department, ash carts for the street department, automobiles for use in different departments, and other miscellaneous departmental equipment.

The city planned to provide funds for the proposed purchase of equipment by an issue of serial bonds. These bonds were to be retired within five years by equal annual payments of principal. These annual payments were to be made from the general tax revenue. The bonds were expected to bear interest of from 4% to 4½%, depending upon the condition of the market at the time of issue.

The city previously had issued serial bonds maturing in from one to five years for the purchase of departmental equipment. In 1918 the city had issued such serial bonds for this purpose to the amount of \$35,000, interest at 4½%; in 1920, to the amount of \$50,000, at 5½%; in 1921, to the amount of \$55,000, at 5½%; and, in 1923, to the amount of \$85,000, interest at 4½%. The amount of such bonds outstanding April 1, 1924, was \$138,000. The city debt on that date totaled \$10,115,300 and was distributed: \$5,416,900, "funded debt"; \$3,244,400, "serial debt"; and \$1,454,000, "water debt." The total assessed valuation of real estate and personal property subject to taxation by the city of Cambridge was, on April 1, 1924, \$158,518,900, and the tax rate was \$33.30 per \$1,000 of assessed valuation. The property was assessed at 100% of the estimated market value.

A few members of the city council objected to issuing bonds to provide funds for the purchase of equipment. They believed that equipment which had a service life of less than five years should be paid for from the tax levy for the year in which the purchase was made and that the cost should be considered as a

current operating expense of the city rather than as a charge to capital investment.

The mayor and a majority of the members of the city council believed, however, that the taxpayers of 1925 should not be burdened with the entire cost of the equipment. If the \$125,000 needed for the equipment were taken from the 1925 tax levy, the tax rate would have to be increased approximately 80 cents per \$1,000 of assessed valuation.

The city council voted to approve the \$125,000 appropriation for departmental equipment and to secure the funds by the proposed issue of serial bonds.

COMMENTARY: This case raises the question whether a city should finance the purchase of equipment which has only a short service life by the issuing of bonds or out of current revenue.

One of the tendencies in municipal government which has attracted more than ordinary attention has been the increase in municipal indebtedness. During the 20-year period from 1905 to 1924 the per capita net debt of all cities over 30,000 more than doubled, rising from \$50.94 to \$110.09. In part, this increase was due to the decline in the purchasing power of the dollar, but with allowance for this fact it is generally recognized that most cities have been too lax in regard to their debt policies. As a result, the taxpayers have become overburdened with debt, and payments for interest in American cities constitute today about 10% of their total expenditures. There are some cities where as much as 15 cents to 20 cents of every tax dollar goes for interest on indebtedness. A portion of this indebtedness has been caused by the vast expenditures for public improvements of a permanent nature made necessary by the rapid growth of cities. But unfortunately a large share has been incurred because city officials, for political and other reasons, have too often followed the line of least resistance in passing expenditures along to future generations; in borrowing for current expenses when hard pressed for money; and in refunding old debts instead of paying them off when they became due. Also because of tax exemption and other features, cities have found a ready market for their bonds; this has made borrowing an easy matter. In fact, most cities have not followed a sound debt policy, although more and more attention is being paid to this subject, with the result that the debt situation is being rapidly improved in a number of cities.

A sound municipal debt policy requires in the first place that a city should rely mainly upon current revenues and should borrow as little as possible. As a general rule, it should not borrow for constantly

recurring expenditures, for the mere alteration or repair of existing improvements, or for the replacement of ordinary equipment. A large city which motorized its whole fire department in a single year or changed its system of ash and garbage collection from private to public hands might be justified in borrowing for such purposes. A city such as Cambridge, however, which has motorized its fire department and is already engaged in the direct collection of its ashes and other wastes, has to spend about the same amount each year in the replacement of equipment for these purposes and should, therefore, finance the purchase of such apparatus out of current revenue. As far as possible, a city should follow the pay-as-you-go policy, resorting to bonds only in the case of public improvements of a permanent nature which require a large outlay, such as new streets, buildings, parks, and public utilities.

In arriving at the decision to purchase short-lived equipment out of borrowed funds, more weight might well have been given to the merits of the pay-as-you-go plan. The decision was influenced evidently by the fact that if the \$125,000 needed for the equipment were taken from the 1925 tax levy, the tax rate, which already stood at \$33.30 per \$1,000 of assessed valuation, would have to be increased approximately 80 cents per \$1,000. But it does not appear that an increase of less than 3% in the tax rate of a prosperous city would be so burdensome as to warrant a departure from the pay-as-you-go policy.¹

A sound debt policy requires also that the term of bonds issued should be for a period somewhat shorter than the expected life of the improvement or equipment to be provided and that the serial bond method should be followed rather than the sinking fund plan. The decision does not appear to have been based upon sufficient consideration of the fact that most of the equipment to be purchased through the issue of bonds would be completely worn out or obsolete in five years. On the other hand, the provisions for limiting the life of the bonds to a period as short as five years and for using the serial bond plan, which is less open to abuse and more fair to the taxpayers than the sinking fund bonds, were desirable as well as being in conformance with the laws of the state.² Also the arrangement of the series so as to retire an equal amount of bonds each year was desirable, as it would reduce the interest charges and also diminish the debt toward the end of the five-year period when most of the equipment would have become of little use. There are other requirements a city should heed in borrowing, but those mentioned above are most applicable to this case.

May, 1926

A. C. H.

¹ Anderson, William, *American City Government*, 1925, pp. 591-603; Munro, W. B., *Municipal Government and Administration*, 1923, Vol. II, pp. 487-489.

² See *The General Laws of Massachusetts*, 1921, Chapter 44, Sections 7, 19, and 47.

ROBERT L. HUNT, INVESTOR¹

PERSONAL INVESTMENT—*Building Up Estate through Life Insurance and/or Investment in Bonds.* A department store executive, married, with one daughter, at the age of 36 was saving \$600 a year, had \$1,800 in savings, and was paying annual premiums of \$750 on \$30,000 of insurance policies including endowment and accident types. Since he wished to build up an estate more rapidly than savings bank interest rates allowed, he studied the advantages of additional insurance policies, both 20-payment life insurance and 20-year endowment insurance, as contrasted with instalment purchases of bonds. No decision recorded.

(1923)

In 1923 Robert L. Hunt was making payments on insurance policies totaling \$30,000, the annual premiums on which amounted to about \$750. On the salary which he received as purchasing agent of a department store in a city of 150,000 population, he was able to support his wife and daughter and, by careful management, to save about \$600 a year. He had accumulated \$1,800 in a savings account, but, as he wished to increase his estate at a more rapid rate than 4% a year, he intended either to take out additional insurance or to invest his savings in sound 6% bonds.

In 1917 Mr. Hunt had married, at the age of 30, and had taken out his first insurance policy, a \$5,000, 25-year endowment on which he paid annual premiums of \$32 a thousand. When his daughter was born, Mr. Hunt had begun payment on a \$5,000 endowment policy which would be paid up at the time she should be ready for college. The premium rate on this policy was about \$40 per thousand.

In the period from 1919 to 1923, Mr. Hunt had begun payments on two more insurance policies. One of these was a \$10,000 accident policy on which the premium was \$18 a year. The other was a \$10,000 endowment policy on which the premium amounted to about \$36 a thousand a year. Payments on this policy would be completed by the time Mr. Hunt was 60 years old. The policy provided that Mr. Hunt would receive \$36 a month from the time payments were completed until he died, or, in case of his total disability, \$50 a week for two years, or, in the event of his partial disability, \$25 a week for the same period. Moreover, by the payment of an extra annual premium of \$4 per

¹ Fictitious name used for purpose of disguise.

thousand, Mr. Hunt could double the face value of the policy should he die by accident.

Once, before marrying, Mr. Hunt had tried speculating on the stock exchange. He had purchased American Can common stock with \$100 which he had saved. On this purchase, he had neither made nor lost money. After marriage, he had decided that he could not afford to risk his small savings speculating on the exchange and that he could protect his wife's interests best by purchasing life insurance. He had not purchased bonds, because his savings had been small and he could not create immediately so large a fund by investing in bonds as by taking out insurance.

Mr. Hunt was convinced that a 20-payment or 30-payment life policy or a 20-year or 30-year endowment policy was more suitable for him than a straight life policy, because the limited number of payments would enable him to pay the policy up during his years of greatest earning power. The premium rate was higher on a 20-year endowment policy than on a 20-payment life policy, because an endowment policy yielded a return immediately upon the completion of the premium payments. The premium on an endowment policy might be considered as the sum of two premiums: one, a payment for protection in case of death; and the other, an investment to provide cash at the end of the period.

It was suggested that Mr. Hunt purchase a 20-payment life policy instead of a 20-year endowment policy and invest the

EXHIBIT I

CASH VALUE OF 20-YEAR, \$1,000 ENDOWMENT POLICY COMPARED WITH CASH VALUE OF 20-PAYMENT, \$1,000 LIFE POLICY PLUS THE AMOUNT OF THE DIFFERENCE IN PREMIUMS ON THE 2 POLICIES INVESTED AT 6% COMPOUNDED SEMIANNUALLY

Number of Years from Date of Policy	Cash Value of 20-Payment, \$1,000 Life	Difference in Premiums* at 6% Compounded Semiannually	Total	Cash Value of 20-Year, \$1,000 Endowment
1	\$ 17.30	\$ 15.70	\$ 33.00	\$ 32.74
5	93.46	88.68	182.14	177.83
10	206.47	207.85	414.32	395.98
15	343.07	368.01	711.08	664.91
20	508.49	583.25	1,091.74	1,000.00

*Premiums on life policy taken as being \$7.51 less semiannually than premiums on endowment policy. Based on published rates for United States Government insurance for age 30.

amount of the difference in the premiums on the 2 policies at 6% interest compounded semiannually. Exhibit 1 shows the cash value of a 20-year, \$1,000 endowment policy for 5-year intervals as compared with the cash value of a 20-payment, \$1,000 life policy plus the value of the difference in premiums if invested at 6% compounded semiannually. Published rates for United States Government insurance for age 30 were used as typical of the relationship between the premiums on the 2 types of policies.

The comparison shown in Exhibit 1 indicated that Mr. Hunt would find it more profitable to purchase the life policy and invest the amount of the difference between premiums on that policy and on the endowment policy, than he would to purchase the endowment policy. Mr. Hunt's wife, as beneficiary, would be protected as well by one policy as by the other in the event of his death. If he purchased the life policy and invested the saving in premiums as suggested, his wife would have, in case he died, the funds so invested as well as the value of the insurance.

It was pointed out that Mr. Hunt might find it even more profitable, however, to invest the total amount of the premiums required on a 20-payment life policy at 6% compounded semiannually and not take out any insurance. On the assumption that the premiums on a 20-payment life policy, amounting annually to \$25.02 per \$1,000, were invested in this way, the comparison shown in Exhibit 2 was prepared.

EXHIBIT 2

CASH VALUE OF \$1,000, 20-PAYMENT LIFE INSURANCE POLICY COMPARED WITH VALUE OF PREMIUMS ON THAT POLICY IF INVESTED AT 6% COMPOUNDED SEMIANNUALLY

Number of Years from Date of Policy	Premiums on 20-Payment, \$1,000 Life Policy (\$25.02 annually) Compounded Semiannually at 6%	Cash Value of 20-Payment, \$1,000 Life Policy
1	\$ 26.15	\$ 17.30
5	147.71	93.46
10	346.23	206.47
15	613.02	343.07
20	971.57	508.49
25	1,305.71	683.37*
30	1,747.32	918.39*

*Cash value of paid-up policy plus interest at 6% compounded semiannually.

NOTE: Calculations of interest based on *Gibson's Simplified Compound Interest and Functioning Tables*, pp. 47 and 75.

According to the information in Exhibit 2, the value of the amount of the premiums on a 20-payment, \$1,000 life policy invested at 6% compounded semiannually always was greater than the cash value of the insurance policy. Mr. Hunt's wife would be protected more adequately by the insurance than by the investment of the premiums during the 20 years that payments would be made on the policy. From the time payments were completed, however, the invested fund would outgrow rapidly the value of the paid-up policy. The comparative values as given in Exhibit 2 are shown graphically in Exhibit 3.

In 1923 funds could be invested currently in sound bonds to return 6%. Savings of less than \$1,000 usually could not be used to purchase bonds. An investment banking firm, however, with offices in New York, Chicago, Philadelphia, Boston, and other large cities, had devised a plan which enabled small inves-

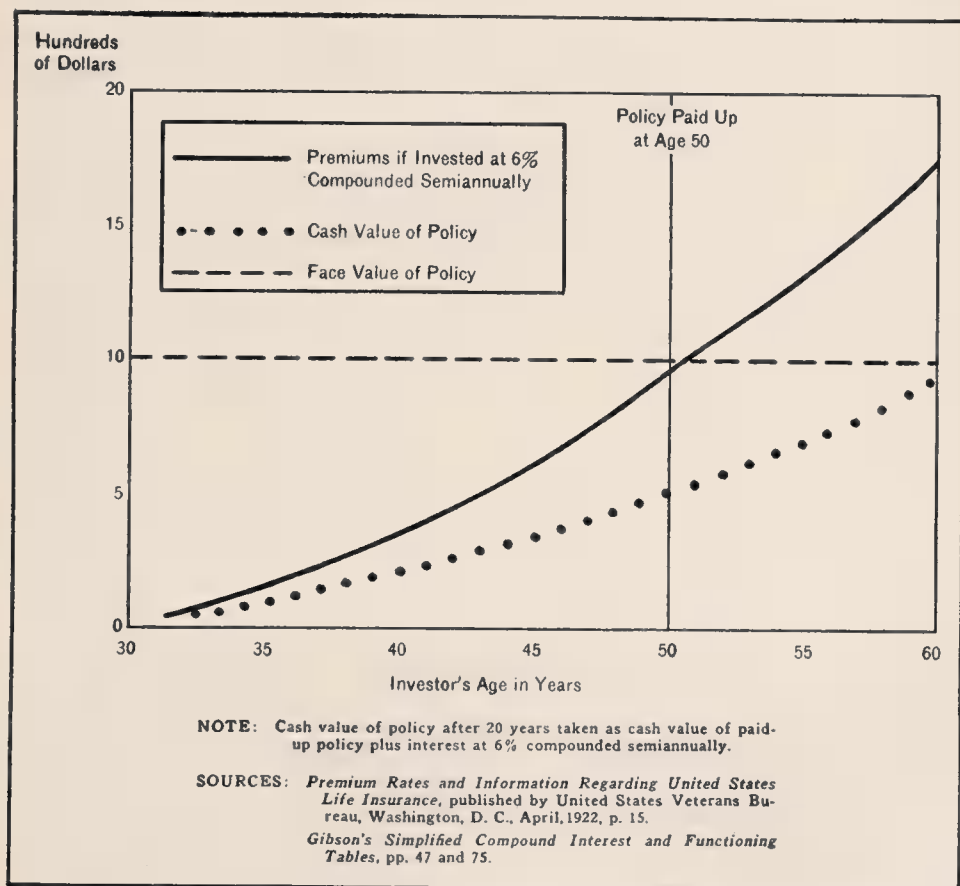


Exhibit 3: Cash value of \$1,000, twenty-payment life insurance policy compared with value of premiums if invested at 6% compounded semiannually.

tors to buy securities as their savings accumulated monthly. A booklet issued by this firm set forth the plan as follows:

The investor selects from our extensive list of bonds an issue which suits his requirements as to type, denomination (\$100, \$500, \$1,000), maturity, and yield. The only limitation placed on selections of bonds to be purchased under this plan is that they must be our own bonds which we have on hand as part of our original purchase. The plan does not apply to the purchase of bonds which we purchase on the market on customers' orders, or to Liberty bonds. Our own original holdings, however, are always extensive enough to meet any ordinary requirements, and the fact that they represent issues of our own underwriting is an assurance that they have measured up to exacting standards.

The purchaser makes his first payment of at least 10% of the par value of the bonds purchased and agrees to complete payment in like amounts during succeeding months. The purchaser, of course, may complete payment at any time that he desires. As title to the bond remains in us during the period of payment, we retain the bond interest, and, in turn, allow interest on all payments from the date of receipt to the date of final payment, the rate depending upon money market conditions—thus the buyer obtains the benefit of a profitable rate of interest while his funds are accumulating.

If the purchaser finds it necessary to discontinue his payments before completed, he authorizes us to sell the bond toward which his payments have been applying, at the prevailing market price. After adjustment, if any, resulting from change in the market price of the issue, his funds are returned to him with interest.

The investor under this plan obtains an attractive return starting with his first payment. Without waiting until he has the full amount necessary to make the investment, he obtains interest on his funds while accumulating and, if after the payments are completed he finds it necessary to sell his bonds, he obtains interest on his investment to the very day of sale.

Another advantage of this plan is that it provides the necessary system, obligation, and incentive so necessary to successful accumulation. The system is provided through the regular, periodic payments; the obligation, by the contract existing between the buyer and ourselves; the stimulus, by the desire of the buyer to own the bond which is the end toward which he is working.

The average person is extremely reluctant to part with a bond when once acquired. He looks upon it as a definite accomplishment and as a part of his estate which is not to be disturbed except in case of extreme necessity. Thus bond investments have a distinct advantage over cash or bank balances which are sometimes expended, largely because of their ready availability.

This firm had charts illustrating the rapidity with which a large fund could be accumulated under a plan of systematic saving. For instance, a fund of \$25,000 could be built up in 20 years by the investment of \$54.31 monthly at 6% interest, the amount of the interest being invested as earned. Similarly, a fund of \$50,000 could be created in 30 years by the investment of \$50.23 a month at 6%.

Information is not available as to whether Mr. Hunt purchased bonds or additional insurance.

COMMENTARY: The question of whether to take out an endowment policy or to invest the money in sound bonds on an instalment basis depended almost entirely on Mr. Hunt's personal character and ability. If he had the judgment to select a sound security or if he was willing to accept the advice of a reputable banker, he would have increased his estate more rapidly by the purchase of high-grade bonds. In order to provide for his wife and daughter during the period in which he was accumulating an estate, he should have taken out ordinary insurance, on which the premium is much less than on endowment insurance. The need of insurance for protection purposes should not be confused with the desirability of creating an estate, as is sometimes done when an insurance salesman advocates an endowment policy not because his client needs this policy but because it bears a higher commission.

If Mr. Hunt did not have the will power to force himself to save regularly, it would have been desirable to have the stimulus of an insurance company's demanding regular payments on an endowment policy. The fact that he already had accumulated \$1,800 in a savings account and was managing to save at the rate of about \$600 a year indicated that he did have this will power and a desire to save systematically.

It is probable, therefore, that he should not have taken out a new endowment policy but should have converted his existing endowment policies into ordinary insurance of sufficient amount to protect his wife and daughter in case of his death. The money realized from converting his endowment policies into ordinary life insurance, together with his savings, then should have been invested in sound bonds. In making this investment, it was desirable that Mr. Hunt rely on the impartial advice of his banker rather than on the suggestion of a bond salesman, whose judgment might have been biased by the particular type of bond which he was called upon to sell.

HARVARD BUSINESS REPORTS
COMMENTARIES
ON
CASES IN VOLUME 1

COMMENTARIES ON CASES IN VOLUME 1

I. JAMESVILLE GAS & ELECTRIC COMPANY¹ I H.B.R. 3

COMMENTARY: This case presents the use of a method of executive control of capital expenditures for plant extensions, where the sums of money involved were of sufficient size to justify the president's personal attention to authorizations and subsequent appropriations.

The practice previously in force had been so informal and the control so lax that estimates frequently had been exceeded, with recurrent embarrassment to the financial officers. To avoid the defects of the former methods, the detailed procedure shown by the illustrated forms was instituted.

The forms proceed from the initial request for the work, with a preliminary estimate of expense, to the final disposition of the book entries necessary to close the record. Undoubtedly the minuteness of detail was intentional to overcome the laxness present under the earlier methods. With experience, desirable eliminations or condensations, which would simplify the routine without sacrifice of effectiveness, could be introduced.

An interesting point in organization was the assignment to the statistical department of the responsibility of controlling the operation of the method. Observation of the functions of existing departments indicated that the statistical department was not only the most impartial but also the logical agency for control. A factor influencing this decision was the existence of a system of general budgetary control, the operation of which was supervised by the statistical department.

There is one point of substance which deserves comment. Form 10 was used to explain instances where actual costs exceeded estimates by more than 10%. Apparently no provision was made for explanations of instances where estimates exceeded actual costs. The effect of the one-sided explanations would be the creation of too liberal estimates so as to avoid the necessity for explanations. The inspection of original estimates for inclusion in the budget would be insufficient check to insure close and reliable estimates—there should have been a requirement for an explanation of any estimate differing from actual cost by more than 10% in either direction.

A. J. H., JR.
C. B. P.

December, 1925

¹ Fictitious name used for purpose of disguise.

2. HUDSON TELEPHONE COMPANY¹ I H.B.R. 14

COMMENTARY: This case illustrates the application of a plan as adopted for the control of expenses by a large corporation.

Provision was made for analysis from two points of view: (1) by departments, which observed lines of authority already established within the operating organization (Forms 11 and 12); and (2) by functional expenses, which showed classifications according to purposes of the expenditures (Form 13). In effect, the former analysis was but a departmental subclassification of the latter; or, conversely, the latter was but a consolidation of the former. Each analysis supplemented the other. From the view-point of services performed by the corporation, the functional classification of expenses, which treated the corporation as a unit, was more significant than the departmental for the general planning of activities and the apportioning of expenses. From the view-point of control of expenses, the departmental classification was the more significant because the heads of departments were responsible for all expenses within their departments, and it was only through these heads that expenses could be controlled. Since the very purpose of departmental organization was the control of personnel, obviously the control of expenses should follow the same lines of responsibility and authority.

To provide, then, for a perspective of functional expenses by departmental functions, a summary table was prepared (Form 14). In this, the separate expense accounts were consolidated into more general functions; likewise, the separate operating departments were consolidated into functional groups.

Each form was to be prepared as a monthly report, showing not only the expense for the month but also the cumulative expenses for the year to date. The forms provided for comparisons of the expenses of the current month with those of the preceding month, also of the cumulative expenses to date with the pro rata planned expenses for the year. Thus, if the report was for May, the fifth month of the year, the cumulative expenses would represent the total for five months, and this figure would be compared with five-twelfths of the planned expenses for the year. It was recognized that this method of comparison failed to allow for seasonal variation, or expected differences among months, but it was believed impracticable to introduce allowances in the planned expenses for this variable.

If comparisons of the separate months had been made with one-twelfth of the planned expenses for the year, such seasonal variation as was present in the actual expenses would probably be the dominating

¹ Fictitious name used for purpose of disguise.

influence in discrepancies between actual and planned expenses; hence, the differences could not be relied upon as indicating actual departures of performance from estimates. By comparisons of totals to date, however, seasonal variations would be spread over all the months included in the totals, and hence their effect upon the results would be reduced so that discrepancies between actual and planned expenses would be more significant of actual departures of performance from estimates. It will be observed that the number of months included in the totals of actual expenses would vary from one to twelve, since a fresh start was made each year. Obviously, the effect of seasonal variation would be different in each successive total—ranging from full effect for the single month of January to none at all for the 12 months ending with December.

The summary figures on Forms 11 and 12, showing changes in numbers of employees and explaining causes of changes in salary expense, were helpful data in the interpretation of this class of expenses.

Although the case stated that the forms illustrated were used in connection with budgetary control, it is evident that only the planned expenses were included. The estimation of income, which is an integral part of budgetary control, was excluded from the discussion.

There was an implication that in the estimation of expenses the study of past expenses was limited to the single preceding year. This period was too short for the observance of significant movements which would be influenced by both long-time growth and cyclical fluctuations within the business. Of course, any estimate of expenses from past data would have to be modified by expected conditions of income. Naturally there is a necessary and close relationship between expenses and income, and in the preparation of a budget all relevant factors must be studied and coordinated. Conditions peculiar to any industry or firm must be considered carefully in such studies.

A. J. H., JR.
C. B. P.

December, 1925

3. GENERAL MOTORS CORPORATION I H.B.R. 21

COMMENTARY: The frank, public explanation of the corporation's mistakes in this case and of its methods of correcting those mistakes is a worth-while contribution to the study of the problems of business management. When more corporations are equally frank and open in dealing with their mistakes, general improvement in methods of management will be accelerated. The problems set forth in this case pertained primarily to general management policies. As usually occurs in

such instances, these problems ramified into questions of finance, production, sales, accounting, and statistics. It is to the major problems, however, rather than to their ramifications, that attention is directed here. The chief problem presented was that of inventory and purchase control by a large corporation owning several operating companies. A second problem was that presented by the corporation's experience in the tractor business.

The tractor problem was the narrower and more specialized and, therefore, may well be disposed of before entering upon a discussion of the larger problem of organization and control. The corporation's venture in the tractor business extended over four years and resulted in a loss of \$33,240,044. Of this total loss about one-third was accounted for by operating losses, and the balance by losses in liquidating inventories and commitments. The primary cause for these unsatisfactory results was set forth in the company's report as follows: "After the tractor was fully developed and priced at \$650, it was found that it could not be marketed profitably. Prices were raised only to discover that sales could not be made in competition with more cheaply designed tractors." This statement indicates that the market was not analyzed with sufficient care before large-scale manufacturing operations were commenced. In this case the elementary principle that production plans should be governed by the potential market was not observed and the limits to the potential market for the corporation's product were not ascertained until too late. This was a new type of product, to be sure; and the difficulties of forecasting demand were therefore greater, perhaps, than for an article for which demand had been more generally crystallized. These difficulties were augmented, furthermore, by the spirit of precipitate business activity which prevailed in 1919 and 1920. Nevertheless, it is not likely that the obstacles to an evaluation of the potential market were insuperable; and the statement in the report quoted above indicates that a thoroughgoing preliminary analysis of the market was not undertaken.

The heavy inventory losses sustained by the corporation in 1920 and 1921, in divisions other than the tractor division, were caused largely by the failure of the executives of several operating divisions to heed the letter and the spirit of the rulings of the executive and finance committees issued in May, 1920. It is unnecessary to enter upon a discussion here of the question as to whether the approach of the impending crisis should have been foreseen earlier than May, 1920. The significant fact is that the severity of the losses could have been lessened greatly if the rulings issued at that date had been heeded.

The wisdom of avoiding inventory accumulations when a business crisis is impending is self-evident. In this instance the directors of

the corporation apprehended the crisis and issued rulings that were aimed at the minimizing of inventory losses when prices dropped. The failure of the executives of several operating divisions to heed those rulings and the methods subsequently adopted for securing henceforth the observance of any program laid down by the board of directors and its committees on inventories and commitments illustrate a point of general significance in business organization and management.

The corporation had a plan. That plan was communicated to the executives of the operating divisions. Under the system of decentralized authority and responsibility which was essential in such a large corporation, the executives of the operating divisions had the authority and responsibility for carrying out that plan. The board of directors, however, failed to recognize the fact that in delegating authority and responsibility to the executives of the operating divisions the directors did not divest themselves of responsibility to the stockholders of the corporation. Since the directors had that responsibility they should have exercised enough control and supervision to make sure that their rulings were being observed. This obligation was recognized after the heavy losses had occurred.

This case points to the general conclusion that when a system of decentralized authority and responsibility is utilized in the management of a corporation, the chief executives and directors should recognize that they can divest themselves of responsibility for the details of operation but not of the responsibility for the execution of major policies by subordinates. Hence an adequate system of control should be maintained to enable the chief executives and directors to learn promptly of any grave derelictions among executives to whom the task has been delegated of carrying out major policies.

December, 1925

M. T. C.

4. LITTLE NECK TEXTILE COMPANY¹ 1 H.B.R. 30

COMMENTARY: The policy followed in this case contrasts with that followed in the Montross Textile Mills case,² where the same issue was raised. The policy of the latter company is discussed in the commentary on that case, page 384 following. The Montross Textile Mills went ahead with a construction and rehabilitation policy in 1920, putting its working capital (plus bank borrowings) into plant and equipment, whereas the Little Neck Textile Company conserved its resources. It is to be remarked, however, that the latter company made no definite

¹ Fictitious name used for purpose of disguise.

² 1 H. B. R. 33.

decision to reject the construction project, although the economic evidence clearly indicated the existence of unsound conditions in general business.

December, 1925

H. B. V.

5. MONTROSS TEXTILE MILLS¹ I H.B.R. 33

COMMENTARY: Is the time to put money into bricks, mortar, and machinery the peak of prosperity or the trough of depression? That, in brief, is the issue raised in this case and in the preceding case of the Little Neck Textile Company. Here the company clearly would have been better off to have conserved its resources in 1920, when the prices of building construction and machinery were high, and to have begun rebuilding and re-equipping operations in 1921, a depression year. In 1920 all the signs of an impending break in general business were at hand; and it would have been better for the mill to have operated until orders fell off, and then to have closed down. The various items of information about the greater efficiency of the new plant (in the absence of factors not disclosed in the case) seem, therefore, to be quite beside the point. The resulting economies would have accrued also had the plant been rebuilt during the depression; and under such circumstances the overhead charges arising from interest and depreciation would have been less.

December, 1925

H. B. V.

¹ Fictitious name used for purpose of disguise.

6. ALLAGASH SHOE COMPANY¹ I H.B.R. 38

COMMENTARY: The problem faced by the president of this company during the early months of 1920 is typical of the problems which came to the heads of many manufacturing enterprises toward the end of the period of inflation which followed the close of the war.

In early 1920, the evidence that the general situation in business was unsound was everywhere;² but many business men failed to recognize the signs. Prices were high, and were mounting feverishly, orders were being duplicated, and railroad congestion of traffic resulted in an apparent shortage of goods when in fact none existed. The combined

¹ Fictitious name used for purpose of disguise.

² In a contemporary general analysis, the approach of a sharp readjustment was forecast by the Harvard University Committee on Economic Research, in its *Review of Economic Statistics*, Preliminary Vol. II, February, 1920, p. 29.

reserves of the Federal Reserve banks had fallen nearly to the minimum prescribed by law, and it was evident that some check to the inflation must be applied if the country was to remain upon the gold standard.

An advance of rediscount rates in November, 1919, had brought a reaction in security markets but had been unheeded by a large part of the business community. Superficially, however, there seemed to be no end for the demand for goods, profits ran large, and the opinion was widely entertained that only the "speculators" had been hit, and that "business" would remain good for a long time to come.

The purchasing agent of this company was deceived by the existing apparent evidence of prosperity, whereas the president foresaw the inevitable reaction in commodity markets. The recommendation of the purchasing agent failed to take into account the general economic situation, whereas that of the president did. He was one of the minority of business men who kept their heads and believed that inflation, however prolonged, must ultimately bring a day of reckoning. Conditions in the latter half of 1920 justified his reasoning and decision.

It is also noteworthy that in the early months of 1920 the prices of hides and skins, which are very sensitive to changes in the general business situation, had declined considerably from the high figure of 1919, whereas leather prices had declined very little.³

November, 1925

H. B. V.

³ For a discussion of the price movements and table of indexes of prices of hides and leather, see Harvard Economic Service, *Weekly Letter*, March 17, 1923, Vol. II, No. 11, pp. 72-76.

7. HENSHAW BREAKFAST FOOD COMPANY¹ I H.B.R. 40

COMMENTARY: In this case, as in that which precedes it, the Allagash Shoe Company,² the wisdom of conservative business policies before the break in 1920 is illustrated. Rigid control of credits and careful steps to prevent overstocking by retailers were here used with the aim of preventing inventory losses by retailers, and credit losses by the manufacturer, during the deflation which was believed close at hand. In the Allagash Shoe Company case, however, the executive control was exercised after orders had been taken, and the needed raw materials were not bought. In the present case, activity of the sales department was controlled.

May, 1926

H. B. V.

¹ Fictitious name used for purpose of disguise.

² I H. B. R. 38.

8. DAMERON SHOE COMPANY¹ I H.B.R. 42

COMMENTARY: This case raises two significant questions: What price policy should have been adopted by retail store executives who recognized the risks of an inflated inventory built up in the hope of speculative profits? Was speculative buying compatible with the merchandising of style shoes?

Previously, this high-grade shoe store's speculative purchases had been infrequent. During the inflation period of late 1919 and early 1920, however, it had bought heavily for speculative purposes. Prices were rising and customers' demands were insistent. By April, 1920, the inventory was the largest in the company's history. With the passing of the peak of inflation in May, 1920, and the beginning of a period of falling prices, the company faced the question of sacrificing a substantial part of its "expected profits."

The case states that although the appreciation of inventory had increased profits, the later price recessions wiped out those gains. It may be assumed, therefore, that the speculative profits in their entirety were looked upon by the company as "real" and not as "paper profits." No part of them was set aside as a reserve, but such a reserve well might have been created, either to furnish the additional funds needed in view of rising costs of new stocks, or to offset possible losses from inventory depreciation. Without a reserve of this nature, larger profits are shown than actually are justified by the operating needs of the business as a going concern.²

When the first signs of the crisis in the retail field appeared, the company had accumulated an unwieldy inventory to sell at high prices, and had either to maintain its prices in an attempt to convert the expected profits into cash, to reduce its prices cautiously, or to mark them down sharply enough to liquidate its excess stocks.

That test of managerial ability was far from new. Writing in the latter part of the seventeenth century, the French merchant Jacques Savary declared that "higher quality of judgment is shown by the losses that are accepted than by the gains that are made. No great qualities are required when it is a matter of selling for 11 livres goods that cost only 10; but when one decides to sell them for 9 livres, the courage and judgment are shown."³

The intensity of the preceding inflation period was sufficient to

¹ Fictitious name used for purpose of disguise.

² For full treatment of this subject, see Putnam, George E., "The Rôle of Paper Profits in Industry," *Harvard Business Review*, January, 1926, Vol. IV, No. 2, pp. 129-137.

³ *The Perfect Business Man*, quoted by Usher, A. P., *Harvard Business Review*, April, 1925, Vol. III, No. 3, p. 285.

justify the Dameron Shoe Company's executives in expecting a fairly long period of slack demand, surplus stocks, and lower prices. In that situation, a rapid stock-turn was especially desirable as a means of checking inventory losses. The company, therefore, acted wisely in deciding to reduce its prices. The exact amount of the mark-down, of course, was a matter of judgment. Coming at the end of a period of high prices, any mark-down would attract attention. It had, then, to be large enough to stimulate active buying, yet not so drastic as to shake consumers' confidence in the company's wares. The company's immediate aim was to reduce its inventory rapidly at a minimum sacrifice. The initial 20% mark-down was effective; sales increased during May and June, while the inventory was contracted.

The second point brought out in this case is the distinction between merchandising on a style basis and on a business cycle basis. The store customarily had bought frequently throughout the year, in order to have its stocks conform to the changing styles in shoes. The number of pairs ordered in each new style no doubt was small, because the store emphasized distinctiveness in style, and, therefore, must have experimented constantly with new, high-price shoes. Such a policy was conducive to small, frequent orders; it meant careful ordering and reordering of sizes to meet current needs, and prompt discontinuance of styles which were imitated in lower-price shops.

Individual styles usually move in style cycles of their own, governed by influences which, as is brought out in the commentary on the Kendall Shoe Corporation case, are for the most part independent of the business cycle.⁴ The speculative buying policy, therefore, adopted by the Dameron Shoe Company in an attempt to take advantage of the upswing of the business cycle, was incompatible with style merchandising. The store had to forego its customary consideration of the style element. Subsequent events brought out forcibly the disadvantages of that change, despite the additional sales to temporary customers who were attracted by the distinctiveness of high price. Since style risks in retailing are normal, the company's decision in 1921 to base its merchandise operations on style rather than on cyclical factors was sound. The case suggests that in the retail field, adherence to sound style merchandising of commodities subject to style change may prove to be a desirable safeguard against speculative excesses.

June, 1926

C. I. G.

⁴ Kendall Shoe Corporation, 1 H. B. R. 238; commentary, 2 H. B. R. 463.

9. JUSTIN SPECIALTY STORE¹ I H.B.R. 46

COMMENTARY: This case illustrates the application of a merchandise control system to a department handling merchandise with pronounced style characteristics. The essential features of the merchandise control plan used in this case were as follows: (1) simplification of price lines, (2) maintenance of past performance records in pieces, (3) planning of sales, stocks, and purchases by pieces, (4) control of buying in accordance with plans.

The objections commonly advanced to merchandise control systems in department stores, namely, interference with the initiative of the buyer in charge of the department, and the expense of maintaining detailed records, are not of particular importance in this case. The pronounced style characteristics of the merchandise constituted the real difficulty, since rapid style changes made it impossible to attach great importance to records of sales and stocks in the past. Records of sales of hats of different colors, for instance, were likely to prove particularly unreliable. In view of the danger of depending on records of past performance, it is evident that particular care had to be exercised in the planning of sales, stocks, and purchases.

Among the particular points of significance in this case the following may be noted: (1) a wide variety of retail prices is not necessary in the sale of style merchandise; (2) an increase in the rate of stock-turn tends to reduce the number and amount of mark-downs; (3) piece systems of merchandise control may be used effectively in departments where the unit price is sufficiently high.

The general significance of this case is that merchandise control systems can be applied effectively to goods in which style characteristics are predominant.

November, 1925

M. P. M.

¹ Fictitious name used for purpose of disguise.

10. JUSTIN SPECIALTY STORE¹ I H.B.R. 50

COMMENTARY: This case outlines the installation and operation of a system of merchandise control through complete stock records in physical units in all selling departments.

The steps involved in the establishment of this system may be summarized as follows: (1) selection of a limited number of standard retail prices for each selling department; (2) subdivision of the merchandise carried in each department into several stock divisions or

¹ Fictitious name used for purpose of disguise.

merchandise classifications; (3) development of a perpetual inventory system in physical units for each department by merchandise classifications and standard price lines, independent of the dollars-and-cents merchandise records; (4) use for control purposes of weekly reports based on the perpetual inventory, showing condition of each department by merchandise classifications and by standard price lines.

Merchandise control systems such as described in this case usually are objected to for two principal reasons: (1) the trouble and expense of keeping detailed records; (2) the danger of following such records blindly.

The first objection applies more particularly to departments where the unit price is comparatively low; for instance, gloves, hosiery, toilet articles, and other small wares. Where the unit price is below \$1, for example, there is a real possibility that the expense of maintaining detailed stock records may consume all the profit. In some instances, however, it may be possible to modify the plan so as to permit the use of units such as dozens or half-dozens in the stock record system.

With reference to the second objection, it must be recognized that any control system depending on the use of records will be unsuccessful if the records are regarded as an end in themselves rather than as a tool to be used in securing control.

It may be pointed out that the first two steps described in this case, namely, the use of a limited number of retail prices and the development of several subdivisions of merchandise within each selling department, in themselves constitute important tools for merchandise control and do not necessarily need to be accompanied by the establishment of a complete system of stock records in physical units. The use of a limited number of standard retail prices is tantamount to applying the principle of simplification to the retail field of business.²

The subdivision of selling departments into different merchandise classifications permits the development of dollars-and-cents records showing sales, stocks, and purchases for each of these classifications. On the basis of these data, the rate of stock-turn and the percentage of gross margin for each subdivision readily can be determined, particularly if the records are maintained on the retail basis.³

November, 1925

M. P. M.

² See Leon Shoe Company, 2 H. B. R., 143, 149.

³ McNair, M. P., *The Retail Method of Inventory*, A. W. Shaw Company, Chicago, 1925, chap. iv.

II. CLARION PHONOGRAPH COMPANY¹ I H.B.R. 54

COMMENTARY: This case illustrates a policy of restricted distribution through selected wholesalers and selected retailers. The commodity, phonographs, appears to be well adapted to this type of distribution, as contrasted with a method of broadcast or indiscriminate distribution through all available channels.

Since exclusive territorial rights were given to the 21 wholesale distributors, it is clear that the manufacturing company could fairly insist on the right of establishing sales quotas for these wholesale distributors. Such a procedure, it may be observed, would not have been a sound or practicable policy if the manufacturer had been selling to a large number of wholesalers indiscriminately.

It appears that the manufacturing company followed a sound policy in permitting cancelation of unfilled orders at the time of the business depression of 1920. The quota plan adopted in 1923, however, would not necessarily justify the manufacturing company in refusing to accept cancelations under similar conditions in the future. A question may be raised as to whether the stated policy of expecting the wholesale distributors to take up the seasonal slack in sales, thereby permitting the manufacturing company to even out its production schedule, was fully justified, especially since no postdatings were given during the period of seasonal inactivity in sales. The production economies obtainable by the manufacturer, therefore, were not shared directly with the wholesalers whose purchases would make possible those savings.

The quota plan, as adopted in 1923, was designed primarily to facilitate the budgeting of the company's manufacturing operations. This use of a quota plan under these circumstances illustrates one of the marked advantages of the close and continuous relationships between the manufacturer and his channels of distribution which are made possible under a policy of selected rather than broadcast distribution.

A question may be raised as to the soundness of the bases on which quotas were to be computed. Past sales records, interpreted by the manufacturing company according to expected business conditions in the several territories, might well have been supplemented by intensive market analyses. The latter would have revealed the actual sales possibilities of the individual territories.

The agreements made with the wholesalers appear to have been equitable. In the first place, only 30% of each distributor's total seasonal quota was to be delivered during the slack summer months;

¹ Fictitious name used for purpose of disguise.

presumably that was not a burdensome requirement. In the second place, each distributor was assured of obtaining a fair part of the total output apportioned in advance according to his probable needs. The distributors were assured of attention to their requirements. Lastly, they received the benefits of the additional sales promotion work to be undertaken. It might be expected, however, that experience with the company's plan would point the way to more scientific methods of determining quotas.

It may be concluded, therefore, that the quota plan described in this case could be expected to prove advantageous, provided: (1) that quotas were set fairly; (2) that the plan was not used as a means of enforcing an ironclad policy of accepting no cancelations; and (3) that no unfair burden was placed on the wholesale distributors in taking up the seasonal slack in sales.

June, 1926

M. P. M.

12. STOUND EQUIPMENT COMPANY¹ I H.B.R. 58

COMMENTARY: This case illustrates the use of secular trend for long-time forecasting, and also the adjustment of data for price inflation and declining prices.

This was a manufacturing company so large that its financial program, especially as to plant expansion, should be planned well in advance. The base for this would be the expected annual sales for several years—the president set the limit at 1935, 13 years ahead. There was the known fact that prices during the years of the World War were inflated by currency issues which had undoubted sympathetic influence upon prices of products of the company. Use was made also of the observed facts that prices in the United States had declined after the War of 1812, and again after the Civil War—in each case there was a peak occasioned by inflation after which the drop was sharp for 2 to 6 years and then the decline was gradual for about 30 years after the peak; normal, however, was reached apparently about 15 years after the peak. The peak of prices for the World War was located in 1920, as evidenced by indexes of general prices.

From a statistical point of view there were four specific problems: (1) the correction for inflation of a price series, (2) the measurement of secular trend, (3) the projection of secular trend, and (4) the adjustment of the projected trend to allow for expected decline in prices.

Obviously, the necessity for the deflation of sales made during the years of price disturbance was real. The lack of homogeneity was a

¹ Fictitious name used for purpose of disguise.

vital defect; it would be fallacious to fit a trend to data a substantial portion of which was not homogeneous with the rest of the series.

The use of the internal price index was sound. No company could produce such a varied range of products that a general price index of wholesale commodity prices could be used in adjusting its total sales. The internal price index as constructed probably was reliable. The number of articles produced is not stated, but the assumption is reasonable that the 20 standard articles were selected carefully to yield a representative sample. The proportion of 50% of total output indicates a sample of sufficient size to be reliable.

The method of inflating sales at normal prices to secure the same effect as deflating sales at abnormal prices was not only sound but also was an ingenious way to obtain another aspect of the subsequent steps. This showed care in planning the statistical processes.

The selection of the 1922 index of internal prices as a base for the adjustment of sales was justified because it was the most recent year and there was reason to believe that this price level was somewhere near normal. It was argued later that probably the sharp drop had been completed by 1922, hence giving a semblance of normality to that year. This point is open to argument since only the subsequent movement of prices could determine its validity. The fact that a considerable drop had occurred indicated that 1922 was not so abnormal as 1921 or 1920, and this obviously was in favor of the selection of 1922. It was recognized that the price level of 1922 probably was not stable; the adjustment for declining prices was begun with that year.

The sentence in the first full paragraph on page 59—"Although there had been moderate price changes from 1900 to 1914, they had occurred at an approximately consistent rate"—is somewhat ambiguous. Were the changes (1) predominantly increases; were they (2) consistent in the sense of a constant rate of change; or did they (3) merely reflect cyclical changes in demand? In the light of subsequent analysis, it is here assumed that the last meaning was the intended significance, because the statistician proceeded frankly upon the basis that prices from 1900 to 1914 showed no secular increase—a condition prevailing during these years in many industries where the economies of technical improvements and increased volume of production counteracted the upward movement of general prices.

In the measurement of secular trend, data prior to 1900 were disregarded because the series as a whole indicated that the growth shown in the early years was not stable. Two trends were computed: one for the homogeneous segment 1900-1914, the other for the segment 1900-1922 after adjustment for inflation of prices so as to make this series

homogeneous. The customary method of least squares for compound interest trend was applied.

The justification for the projection of a secular trend as a forecast of future orders must proceed upon the assumption that factors of demand and supply will continue for the period of the forecast substantially as have obtained in the past. Included in the many factors of demand will be growth of population and development of the industry.

The company had grown faster than population. There was reason to believe, however, that the rapidity of growth of population which had contributed to the compound interest growth of the company would decline materially because of the post-war restrictions placed upon immigration. It is not stated whether the compound interest trend shown by this company was shared by the industry or had been achieved at the expense of the industry. If the former, it was the result of insistent demand through rapid expansion of the use of the product; the question then would arise whether this insistent demand would continue. On the other hand, if this growth had been achieved at the expense of the industry, the question would be one of supply. How long could the company so manage its business that it could continue to grow at the expense of its competitors? Or expressed differently, when would competitors improve their management so as to overcome the progressive advantage heretofore enjoyed by the Stound Equipment Company? These points cannot be discussed in the absence of data concerning the industry. It is clear, however, that there was danger in assuming the continuation of such rapid growth as shown by the compound interest curve. In the absence of collateral studies, however, dependence would have to be placed upon the projection of secular trend because it would be the only available method of estimating sales under the conditions named in the case; but the dangers involved, especially with the compound interest trend, would have to be borne in mind.

The series used in the case was one of sales expressed in dollars; hence the data represented both physical volume and price. Correction was made for the war influence on prices. Granted that the correction was reliable, the adjusted data would represent changes in physical volume; the question then would remain: Did the war influence physical volume? This would be a material point, because one of the trend lines included the war years and there were enough of them at the end of the series to affect the slope of the trend. Unusual influences of the war upon physical volume were temporary and it would be dangerous to include them in the projection.

Probably one of the reasons why a trend was computed for the pre-war segment was to secure a projection with all war influences elimi-

nated. This trend showed an increment of 7.38%, while that including the war years corrected for price inflation showed an increment of 7.22%. These figures indicated that there was no appreciable change in physical volume when measured from the pre-war trend line during the period of price inflation—in fact, the slope of the war trend shows a slight diminution in physical volume. This difference has no positive significance, however, as it was so slight that it could be accounted for wholly through inaccuracies in the data. The negative indication that there was no appreciable change was the important thing—this indicated that the trend including the war period probably was as reliable as that excluding the war years.

It should be observed that, although the statistician expected a decline in prices after 1922 such as had occurred in price indexes after the War of 1812 and the Civil War, he did not correct his price index for such a decline in prices. All that he did was to adjust the forecasted sales so that, in his judgment, they would be reduced to the pre-war price level which would be reached in 1935. He considered that a “gradual” decline would occur; he did not define how he would measure this gradual decline. In the absence of reason to use a different process, it would be natural in a case of this kind to spread the difference equally over intervening periods of time. This would constitute what is known as a “straight line” correction, because on an arithmetic scale graph such an adjustment is represented by a straight line. In this case, although the statistician did express his correction of prices by a straight line, it was done upon a log scale chart. It can be shown that by correcting the price index with a straight line and then by deflating the forecasted sales with the corrected index, sales figures slightly different from those read from the chart will result. Limits of error are $+ .54\%$ and $- 2.96\%$. These figures show that the results obtained by graphic methods were reliable.

Within the information contained in the problem the statistical methods were both ingenious and sound, and the results were well within allowable error for estimates of this nature.

May, 1926

A. J. H., JR.
C. B. P.

13. TESSAT ELECTRICAL COMPANY¹ I H.B.R. 67

COMMENTARY: The objectives sought in this case were a quick estimate of market possibilities as indicated by states in which the demand for the company's product appeared to be strongest when measured by

¹ Fictitious name used for purpose of disguise.

selected factors, and a method of computing sales quotas for those states.

The product was a small unit electric lighting plant to be used by consumers. It was a durable good. Its market was wherever electric light was desirable and electric service was not available.

After selection of suitable factors to measure market possibilities, it was necessary to express them so that they could be combined into a composite index that would signify relative values among the states. In order to give quantitative value to these relatives by states, it then was necessary to devise a method of applying these relatives to estimated sales of units of product.

The factors selected to measure market possibilities may be classified into those relating primarily to rural districts and those relating primarily to urban districts. Those relating to rural districts will be considered first.

The factor "Percentage of Farm Income in State to Total Farm Income in United States" was wholly relative in nature. The justification for its inclusion would be that, of the total sales to farmers in the United States, the percentage sold in each state would be influenced by the proportion of farm income of each state to the total for the country.

The factor "Farms Operated by Owner or Manager" would be an indication of demand. Obviously, a farm operated by an owner would offer a better sales opportunity for a durable good than a farm operated by a tenant. Hence those states with larger numbers of owner-operators would present possibilities for greater sales than those states with smaller numbers.

The significance of "Number of Farms" would depend somewhat upon the selling price of the product. Possibly a small farm would represent a potential sale just as would a large farm, because each is a unit capable of using electric lights. The element of ability to buy, moreover, would be present in farms of all sizes, although it might be argued that the cost of the lighting plant would be less of a bar against sales to large farms than to small ones because the incomes of the former would be larger. The usefulness of this factor cannot be appraised intelligently in the absence of knowledge of the selling price.

The value of the factor of "Improved Land in Acres" is not wholly clear, since this merely indicated the number of acres under cultivation. If this factor had been divided by the "Number of Farms" to obtain an item, "average amount of improved land per farm," the resulting figures probably would have been a better measure of demand than either of these two factors in their original forms.

Each of the four preceding factors varied with area of the state,

although in different degrees. In this variability, density of population would be a contributing factor. The point is, however, that, other conditions remaining equal, each of these four factors would vary directly with the area of the state. Area would be a dangerous element on which to base sales possibilities for a consumer good, as wide areas might introduce inaccessibility, which would have an important influence upon sales. This does not mean that these factors should have been rejected, but it does mean that they should have been used with due regard to their dangers. In this case, the inclusion of factors depending upon area was justified by the purpose in mind, which merely was to estimate relative sales possibilities of the several states. Within this limitation, the presence of inaccessibility would not be a disturbing factor, although it would have to be recognized in planning or controlling sales.

"Average Income per Farmer," obviously, was a definitive measure of unit purchasing power. It probably was the most significant of all the factors.

"Farm Light Units Sold" was the only factor for which data were not taken from published sources; this information came from the files of the Dunstan Manufacturing Company. It was not disclosed whether the figures represented sales of all lighting units in the market or constituted only a sample. Since this product was a durable good, past sales might indicate a satisfaction of non-recurrent demand, hence a reduction of sales possibilities. It is reasonable to presume, however, that this product was sufficiently novel so that sales of similar articles would measure the amount of educational work done by the industry, hence the degree to which the field had been prepared for additional sales. Under such conditions this factor would become a measure of sales possibilities.

"Unwired Communities" was the only factor primarily relating to urban communities. There was an implication in the case that all the factors, including this one, related primarily to rural possibilities. Examination of the source, however, shows that this factor could not have had such application. It was stated that communities with a few buildings and in no sense urban in character were excluded from the tabulation. As a measure of farm sales, therefore, these data seemed clearly irrelevant. If they were intended as a measure of urban sales possibilities, it would have been preferable to make them part of a separate estimate distinct from the rural factors.

The dominating factor chosen was "Percentage of Farm Income in State to Total Farm Income in United States," as evidenced by the fact that only those states whose income was 1.25% or more of the total income were included in the subsequent study. Since this factor

varied somewhat with area, it was not so significant of market possibilities as would have been the factor of "Average Income per Farmer." If the latter had been employed and the same number of states used, Nevada, Arizona, South Dakota, Washington, Colorado, Idaho, Utah, and Oregon would have been substituted for Pennsylvania, Michigan, Missouri, Arkansas, Kentucky, Virginia, Georgia, and North Carolina. It is probable, nevertheless, that the list used was as satisfactory as one based on "Average Income per Farmer," because of the known fact of large undeveloped areas in those states which would have been substituted. Here, again, enters the element of inaccessibility as opposed to ability to buy.

It was attempted to express the factors in a common unit to permit their inclusion in composite ratings by simple, or qualitative, ranking according to the magnitude of the item for each state. Qualitative ranking has the obvious crudity of making no allowance for variation in the intervals between adjoining items when they are arranged in order of magnitude. This kind of ranking was not applicable because definitive values were desired—sales quotas by states were computed from the rankings. These, then, should have been quantitative, so that the actual differences in numerical values among the several states would have been measured. That there is a real difference in the two methods will become evident from examination of any of the factors shown in Table 14. Take, for example, the "Average Income per Farmer," column 2. The first three states were assigned the values 1, 2, and 3 according to their simple rank numbers; hence, the differences between the first and second, and second and third were assumed to be equal. The actual differences are disclosed by the following tabulation:

	Average Income per Farmer	Difference
California	\$3,485	
	.....	\$131
Nevada	3,354	
	.....	221
Arizona	3,133	

Quantitative ranking should have been used so as to secure definitive measures of the several states which would recognize actual magnitudes within each factor. This result could have been obtained by any process which would introduce a suitable fixed base in terms of which every item would be expressed. One method would have been to express the items of each series as percentages of the totals of their

respective series; another method would have been to express the items of each series as percentages of an average of their respective series, such, for instance, as the median. In either case, the items for each series would have been converted into percentages of the base; then they would have been in proper shape for combination with the other series similarly treated. The statistician recognized the necessity of quantitative ranking because he obtained his numerical ratings, as shown in the last column of Table 15, by the introduction of a fixed base. His final figures were erroneous, however, because he had not performed a similar step for each of the several factors before he combined them.

The process used in Table 16 of computing sales quotas by states was sound, provided the estimate of expected sales was reliable. The application of the process in this case was faulty, however, because quantitative values were ascribed to qualitative rankings. If it is assumed, therefore, that the estimate of expected sales was reliable, the quotas by states were erroneous. There is no way of appraising the degree of error without recomputation—it may not have been material, yet its presence should be recognized.

It will be obvious that the plan of this survey proceeded upon a measurement of market possibilities of several states in relation to each other. At no point in the survey was any attempt made to estimate the volume of goods which could be sold in any state. After the relative sales possibilities had been determined, it became necessary to apply these percentages to a base figure in order to obtain quotas by states. This base was an estimate of total expected sales for all the states, and was the result of a study wholly independent of the survey. Thus, the relative values of the states became merely distributive proportions which were applied to an independent estimate of expected sales. Except for the error in failing to rank the states quantitatively by factors when it was known that the results would be used quantitatively in the computation of sales quotas, the general plan of the analysis was sound.

April, 1926

A. J. H., JR.
C. B. P.

14. BUCK ELECTRICAL COMPANY¹ I H.B.R. 75

COMMENTARY: The problem in this case was to obtain an estimate of the number of weeks required to produce electrical machinery, orders for which were already on the books.

¹ Fictitious name used for purpose of disguise.

The commanding facts were the given sales of machines of three types and various capacities, the latter measured in kilowatts, which were sold for delivery within the succeeding six months' period. There were available cost records which showed the relationship of direct labor costs with the kilowatt-hour capacity of each of the three types as manufactured in the past. There was available also the total amount of all direct labor of the machine-shop when operating at normal full capacity. Finally, in the solution of the problem there was a tacit assumption that the shop would produce no machines other than those included in these sales.

From a statistical point of view there were two specific problems: (1) selection of a common unit to apply to the machines and to the shop, and (2) estimation of the normal rate of production in the machine-shop.

Not only did the machines of different types present differences in nature of manufacturing processes, as illustrated by the wide variations in labor costs shown in Table 17, but no machine was described in terms of machine-shop production. It became necessary, therefore, to devise a measure which would be common to all three types of machines and to the shop production. Analysis showed that labor costs per kilowatt capacity of each type of machine would meet the conditions of production because total labor costs of all machines produced would constitute the total direct labor pay-roll for the shop.

Experience had proved that direct labor cost per kilowatt for each type of apparatus, adjusted for changes in the wage scale, in general varied inversely with the average kilowatt capacity. To ascertain unit costs, therefore, applicable to the sales then on the books, it would be necessary to find from the company's records the cost of apparatus of comparable average capacities.

Analysis of the given sales for delivery within 6 months showed a total capacity of 803,000 kilowatts for the 3 types; and average kilowatt capacities per unit of the 3 separate types: the alternating current, 3,500 kilowatts; direct current, 1,100; and synchronous converters, 1,200. Analysis of recent direct labor costs disclosed unit costs of comparable average capacities of the respective machines (Table 17) to have been: the alternating current, 26 cents; direct current, 66 cents; and synchronous converters, 63 cents.

On the assumption that there would be no change in labor costs before completion of the orders on the books, the direct labor cost of such sales was found by applying these costs per kilowatt capacity to the totals of the respective types of machines. This resulted in a total cost for direct labor for all types and capacities of \$256,120, as shown in Table 18.

The estimation of required production involved a rate of flow, so a unit of time was required. One week was the unit selected.

To express normal machine-shop capacity in terms of direct labor, the number of men at full operation and the average weekly wage as disclosed by the records were multiplied together; 350 employees on direct labor times \$25.95 average weekly wage yielded \$9,083. This represented the total direct labor output of the shop each week.

Since \$256,120 worth of machines would be required, it would take as many weeks to produce them as 9,083 is contained in 256,120, or 28 weeks. This was the point where the common unit of value for product and shop was utilized. The relationship employed was homogeneous because the shop pay-roll was the labor cost which would be distributed over the several types of machines and which could be expressed in terms of kilowatt capacities, as was done in this computation—one dollar of direct labor was the common unit.

Since 28 weeks would be required to complete 803,000 kilowatts of product, the average rate of production each week in kilowatts would be $803,000 \div 28$, or 28,679. This final figure of kilowatts per week provided a convenient measure of control in terms applicable to shop routine. Since all capacities of machines on order were expressed in this unit, progress could be checked easily.

The case shows an ingenious and sound method of relating product and shop capacity, when measured in unlike units, through a derived unit common to both. It will be observed, however, that the final estimate depended upon averages in two places: (1) in the computation of direct labor costs per kilowatt capacity of product, and (2) in the computation of total direct labor pay-roll of the shop. The results could be no more reliable than the averages from which they were drawn; in turn, the averages could be no more reliable than the samples from which they were computed. The case does not contain sufficient data by which to test the validity of either the averages or the samples.

May, 1926

A. J. H., JR.
C. B. P.

15. BARRINGTON MACHINERY COMPANY¹ I H.B.R. 78

COMMENTARY: Where the decision in a case is close, all the data having possible bearing must be available either in the case or in standard references. On the other hand, there arise in the course of business many cases where some one factor, or a few factors, are of preponderant or determining importance, and only enough added data

¹ Fictitious name used for purpose of disguise.

are necessary to make it clear that there is nothing in the situation of sufficient weight to offset these preponderant factors. It is as important to learn to recognize an overwhelming advantage or a fatal defect, and to realize that the rest of the problem may be treated sketchily because of the existence of these major items, as to learn to make a nice balance where no such elements are found.

In this case as presented, it would appear that unless an extensive local housing development for employees at Tonawanda was to be fostered by the company, the long ride and double fare constituted so serious a handicap as to disqualify that site unless there were some very important offset. The immediate deepwater site there seems to have constituted no substantial advantage, and the only remaining one was what appears under one rather doubtful interpretation to have been about 50 cents a ton advantage in delivered price of pig iron part of the time. The erection of controlled industrial towns in the North is justifiably looked upon as an expedient warranted only in very unusual cases, and the experience with the near-by Echota development at Niagara could have given little encouragement. If the sum of countervailing advantages had been great, it is probable that some indirect plan for financing adjacent housing might have been justified, but the case discloses nothing of the sort. Certainly, without such a development, wage-rates would have had to be higher than those quoted in order to attract an adequate labor supply, and probably it would have been hard to insure such supply by any reasonable bidding up of wages.

As between Erie A and Erie B, it would appear that the large cost of piling at A, in absence of much benefit from prospective deepwater facilities, would be enough to determine the decision in favor of B. If A were considered with a view to filling the 1,600 feet to the harbor line, it might be inferred that the power plant, which would be wanted at once, would be at least that distance from ultimate shore line, and this would be an added disadvantage in view of the small river of cold condensing water that is required to maintain the vacuum conducive to maximum economy of a large steam turbine. If the added 100 acres or so of filled land at A were likely to be needed for future extension, such need did not appear in the record and may, therefore, be disregarded. Thus the decision seems to have been the one clearly indicated by the data supplied.

If the decision had been a closer one, it would have been necessary to have at hand figures on the relative contributions to manufacturing costs made by the several items of material, and by labor, in the particular enterprise; information as to whether freights out were in effect borne by the industry, and if so, how the average of these was likely

to compare for the two locations in so far as market destinations could be foreseen; and an estimate of the stability of the conditions of 1904 if the plant came in. A professional report probably would have given some data on these points on general principles. For example, if in fact pig iron delivered at cupola cost 50 cents less a ton in Tonawanda than in Erie at a particular time, and coke 50 cents more, evaluation of these figures requires a knowledge, gained from the case or elsewhere, that the melting ratio was $8\frac{1}{2}$ tons of pig iron to 1 ton of coke—or whatever it was. Also it would be necessary in case of a closer decision to know how much of the green-sand molding could be done at Tonawanda with 85-cent sand, and how much required Conneaut sand or equivalent, what the price of core sand was at Tonawanda, and how much core work there was. Again, it would be necessary to know the relation between tonnage of steel castings and sections on the one hand, and pig on the other. As to labor, relative construction costs would perhaps be determined by the wage schedules given, but if the shops were of large size and of standard unprotected steel-frame construction, as they might well be, they would in typical cases be erected by out-of-town union housesmiths who would refuse to work with local non-union men from other building trades. The case states that in Erie non-union structural steel workers could be obtained readily, and this statement may be taken as settling the point—it is one that would have to be checked carefully, in fact, if the decision were close enough so that it counted. As to the more important matter of operating labor, it will be noted that the main wage difference was in the foundry, and that this was large and was attributed to absence of unions in the trade in Erie. A 30% differential below union scale in a skilled and strongly organized trade, such as molding, is a strong incentive to union activity, and serious thought might well be given to the question whether such a differential could be maintained without loss of morale—if at all. There are other similar places where lack of information is justified only by the fact that the decision turns on other matters and would not be reversed by any likely variation in the missing data.

January, 1926

J. G. C.

16. HARTWICK MINING COMPANY¹ I H.B.R. 87

COMMENTARY—A: From the point of view of economic theory, the important consideration in this case is that the copper mines which it was proposed to merge were relatively high-cost producers, and that the

¹ Fictitious name used for purpose of disguise.

costs were not uniform as between the several mines. The situation for all was critical, because the world's productive capacity had been greatly stimulated by the World War. In order that these mines might compete with the low-cost producers of South America, it was necessary for them to secure all possible economies.²

December, 1925

H. B. V.

COMMENTARY—B: The company's problem was twofold: (1) the determination of whether or not to combine the various copper companies in which the Hartwick Mining Company held an interest, and (2) the determination of the basis on which stockholders in the various companies should convert their shares into stock of the consolidated company.

Costs of production in the various properties were relatively high, and were not uniform as between the different mines. Because of the low price for copper which existed at that time, the companies were forced to adopt every means at their disposal to reduce costs. It appeared that the consolidation of the companies would give marked economies in the operation of the mining equipment, the length of haul of the ore, the use of improved methods and of economical size units in the smelting process, and the more effective distribution of the labor force. In addition to these savings, the company would secure one-eighth to one-quarter of a cent per pound more than the market price, for all copper sold under the Hartwick brand.

The company apparently did not consider, however, that in a combination of this type the management frequently fails to secure the economies expected. Where several small companies are combined, it is usually necessary to give positions to the men formerly in charge of the smaller organizations. The difficulties that may arise from such a transition should not be attributed merely to petty jealousies. Frequently it is difficult for the head of a small firm to adapt himself to the requirements of a position where he is not in absolute control and which requires teamwork of an order different from that to which he is accustomed. The president of the Hartwick Mining Company apparently had been successful in his management policies, but undoubtedly he had carried them out with the assistance of a management of his own selection. It did not follow that because of this success he could meet the new problems resulting from a combination of a number of companies and the merging of dominant personalities of men who until recently had been his competitors. The records of other consolida-

² Thus, this case raises the series of considerations concerning the rent of mines which are discussed by Professor Taussig in his *Principles of Economics*, Macmillan Company, Third Edition Revised, 1924, Vol. II, pp. 98-103.

tions indicate that for some time at least the full amount of estimated earnings under the plan of consolidation probably would not be secured.

In view of the large economies resulting from an improved mechanical operation as a result of the consolidation, however, it is probable that the decision to combine these properties was sound. There remained the problem as to the selection of the basis on which the common shares of the five companies were to be exchanged for shares in the consolidated company. In general, the president was right in his statement that the varied earning powers of the companies were reflected fairly in the market price of their common stocks. There is no information, however, as to whether those stocks were listed on exchanges, as to the size of the individual issues, and as to whether they were widely held. Inasmuch as the Hartwick Mining Company owned from 25% to 51% of the capital stock of the other companies, and many of the stockholders of each company held stock in one or more other mines, it is probable that these stocks were closely held. Consequently, the market price might be affected by the personal bias of a comparatively few individuals. It was probably sound, therefore, to compensate the stockholders of the currently productive mines for the possible reduction in the customary dividend and for the favorable cash position of one of the companies. It often occurs that, because of the superior bargaining power of one or two of the interests as compared with the others, adjustments of this nature are necessary even though the market price should reflect a relatively just valuation of the stocks.

May, 1926

C. E. F.

17. MAGRUDER KNITTING COMPANY¹ I H.B.R. 92

COMMENTARY—A: This case illustrates the importance of the phase of the speculative cycle during which it is proposed that an investment firm sell common stock to its customers. It raises also the question of when an investor should purchase such stock. In May, 1923, when this issue was sold, business and speculative opinion had been unsettled by warnings of impending inflation, and the stock market was declining from the high level attained in March. This decline followed an unduly brisk appreciation in the price of certain commodities, which had stimulated excessive production, especially of basic materials. Record activity developed in certain lines, such as building construction and automobile tire manufacture, and there was some dis-

¹ Fictitious name used for purpose of disguise.

turbance in the labor market. The rapid expansion of business and the rise of prices led responsible public officials and recognized business leaders to sound a vigorous note of warning. The dangers of inflation were emphasized, and in March, Secretary Hoover recommended postponement of non-essential government construction work. Later, the governors of the American Construction Council gave much more general cautionary advice. Moreover, in February and March, the rediscount rate of the New York, Boston, and San Francisco Federal Reserve banks was advanced from 4% to 4½%, and open-market rates for money continued to rise until the middle of May. As a result of these various unsettling influences, prices on the stock exchange declined, and business activity and wholesale commodity prices experienced a rather severe recession. It was while this recession was well under way that the Magruder Knitting Company stock was floated.

Quite aside from the question of the soundness of the particular merger, therefore, it is clear that May, 1923, was not a favorable time for an investment firm to sell common stock to its customers, since the probability of the stock's declining was greater than the probability of its advancing.² The time to float common stock issues is when there is fair prospect of an advancing securities market. In this particular case, the purchasers of securities were especially unfortunate, since the hosiery and underwear business, in common with the textile business generally, suffered from the high price of raw materials during the years 1924 and 1925. Severe competition, attributable to excess producing capacity in the industry, was also an adverse factor.

December, 1925

H. B. V.

COMMENTARY—B: This case involved three decisions: (1) whether the combination should be made; (2) the form of organization; and (3) the type of security to be used to finance the enterprise.

The community of interests of the underwear and hosiery mills was such that definite economies should result from a combination of the two companies. Through the introduction of better methods, the production of the Irving Hosiery Mills could be increased 20% without additional fixed charges, and further savings were possible through simplification in the number of lines manufactured and through elimination of duplication of sales effort. Since raw materials were re-

² The following discussion is taken from Vanderblue, H. B., *Problems in Business Economics*, A. W. Shaw Company, Chicago, 1924, p. 35, note. The reference to *Letters* is to the volume of weekly *Letters*, published in the Harvard Economic Service.

See *Letters*, Vol. I, pp. 276-8, and especially the *Letter* of March 31, 1923, for brief discussion of the relationships between the money, commodity, and stock markets. By the end of March adjusted money rates had advanced the 1¼% which had preceded every major downward movement of industrial stocks since 1897. The rise of 1¼% is measured from the latest recorded

quired in different forms for the two products and the plants were 400 miles apart, no economies could be secured through quantity purchasing or through centralized control of production. As pointed out in the commentary on the Hartwick Mining Company,³ the records of other consolidations indicate that the estimated savings through administration of such a combination do not always materialize. Because of the severe competition in the textile industry attributable to excess producing capacity, it was essential that the mills in this case make every effort to reduce expenses. The opportunity to achieve this result seemed ample to warrant the combination.

The case states that the refusal of a minority of 5% of the Irving Hosiery Mills' common stockholders to sell or exchange their stock prevented complete absorption of this mill as a subsidiary of the Magruder Knitting Company. This contemplated step, moreover, was not entirely desirable, inasmuch as the management wished to main-

low point of rates, and this rise, to be significant, should occur during the revival and prosperity phases of the business cycle.

The essential relationships are indicated in the table on page 36. This shows (a) the dates of low points of adjusted commercial paper rates during business cycles of the last 25 years, and the subsequent dates, (b) when a rise of at least 1¼% was registered, and (c) when a major decline in industrial stock prices began.

It is evident from the table that, during the past 25 years, an increase of 1¼% occurring during periods of rising industrial stock prices has forecast periods of decline in these prices; but it is also evident that such a rise does not indicate an immediate downward turn of the stock market. Since intervals varying from two months to more than a year have intervened between such a rise of interest rates and the beginning of a major downward movement, the present increase of somewhat more than 1¼% indicates that the upward movement of the general average of stock prices has about culminated, but does not enable one to forecast the date of the beginning of a major downward movement. *Letters*, Vol. II, p. 86.

RATES ON 60-90-DAY PAPER CORRECTED FOR SEASONAL INFLUENCES					STOCK PRICES	
(a) LOW POINT		(b) RISE OF AT LEAST 1¼% FROM PRECEDING LOW POINT			(c) Beginning of Major Decline in Industrial Stocks	Interval of (c) from (b)
Date	Rate	Date	Rate	Rise		
Dec. 1898	2.53	Mar. 1899	4.11	1.58	Dec. 1899	9 mos. later
Sept. 1900	3.82	Sept. 1902	5.13	1.31	Mar. 1903	6 mos. later
Nov. 1904	3.69	Nov. 1905	5.23	1.54	Jan. 1907	14 mos. later
Dec. 1908	3.35	Nov. 1909	4.65	1.30	Jan. 1910	2 mos. later
Nov. 1911	3.48	July 1912	4.76	1.28	Nov. 1912	4 mos. later
*	*	*	*	*	*	*
Nov. 1915	2.98†	April 1917	4.28†	1.30	July 1917	3 mos. later
Feb. 1919	5.19†	Mar. 1920	6.68†	1.49	Nov. 1919	4 mos. earlier‡
Aug. 1922	3.80§	Mar. 1923	5.16	1.36§	.....	.....

*There was a rise from 4.02 in April, 1914, to 6.18 in August, 1914; but this does not constitute a "signal" since it occurred when business was declining, not during revival or prosperity.

†Seasonal movements in rates were not registered during these years of establishment of the Federal Reserve System and, consequently, no seasonal correction was made.

‡In 1919 money rates were kept at an artificial level, in order to facilitate government financing, and, therefore, did not reflect actual credit conditions.

§To obtain corrected interest rates for these two months, we apply the seasonal adjustment to a base of 5%, and add or subtract the result from the actual rate. The seasonal correction for August is .015 of the base (to be subtracted) and for March is .02 of the base (to be added). For August, then, the correction is $5 \times 0.015 = 0.075$, and for March $5 \times 0.02 = 0.1$. Subtracting the first from the August figure, we obtain a corrected rate of 3.80% for that month ($3.875 - 0.075$); adding the second to the March figure, we obtain 5.16% for that month ($5.06 + 0.1$). The difference ($5.16 - 3.80$) is 1.36%. One-half the pre-war correction is used.

³ Hartwick Mining Company, 1 H.B.R. 87; commentary, 2 H.B.R. 402.

tain the separate identities of the two companies in the minds of customers in order to capitalize the good-will created by extensive advertising. To achieve this result it was decided to form a holding company.

Another reason supporting this step was the necessity of raising funds to purchase the common stock of the Irving Hosiery Mills as well as of providing additional working capital through the sale of securities issued by the holding company. Although the company apparently did not consider the following point, it probably would have been impossible to raise the amount of money required through the sale of any securities of the Magruder Knitting Company. Any attempt to borrow from the banks even a part of this amount would have impaired the company's credit and would have been unsound finance, since the loans would have been only temporary although they were to be used to carry a permanent obligation.

The decision to form a holding company to control a majority of the stock of both the Magruder Knitting Company and the Irving Hosiery Mills was made on a sound basis. There remained the question of whether the consolidation should be financed through the issue of common or of preferred stock of the holding company. The case records only the price at which the investment firm offered the common shares to the public. It does not state the amount which the investment firm would pay the company for either its preferred or common stock. In deciding the relative merits of selling one or the other of these types of stock, such information is important. It is probable that the investment firm hesitated to undertake the sale of the preferred stock of the holding company unless severe restrictions in regard to priority were inserted in the agreement. The redemption of the preferred stocks of these companies was out of the question, since it would have required an additional amount of money. The sale of common stock of the holding company appeared to be the better solution, not only from the standpoint of the company but also from that of the investor. At the time of the case, stock prices had declined, and the textile industry as a whole had been hard hit by severe competition. The type of investor, therefore, who would purchase this stock would be interested in speculation. Although there was considerable risk involved in investing in common stock of such a holding company, there was a compensating advantage in that such a security permitted the investor to secure the full benefit of any unusual profits. That would not have been true had he purchased preferred stock.

A point of significance in this case is the fact that, although May, 1923, was not a favorable time to sell the common stock of a holding

company to the public, the necessity of reducing expenses in the textile industry was so great that it was desirable to form the consolidation of these two mills at that time. Business expediency is frequently of more importance than the added cost which must be paid for financing at such a time.

May, 1926

C. E. F.

18. DARROW SHOE COMPANY¹ I H.B.R. 97

COMMENTARY: The necessity of making small lots in a large factory at a true cost greater than it is advisable to bill to good customers is met in many manufacturing businesses, and constitutes a really important source of loss in some. The cost of making orders far below average size, in a factory working on standard lines, is usually much more than appears from applying routine lot cost methods to the small lot. The outstanding need in such cases is to develop the methods whereby the hidden indirect costs of small lots may be identified and estimated, so that the management may decide its small-lot price policy open-eyed.

The Darrow Shoe Company case indicates that such indirect costs were incurred, and gives data from which some of them could be estimated roughly. More could be identified without estimate. The case gives enough realization of the subdivision and complexity involved to carry conviction that a separate very-small-order plant would not afford a solution in any ordinary case in the shoe business, as it might very well do in some other line of manufacture.

January, 1926

J. G. C.

¹ Fictitious name used for purpose of disguise.

19. MARKHAM KNITTING COMPANY¹ I H.B.R. 106

COMMENTARY: This is a case in which are adequately developed the net advantages that sometimes attach to centralized purchasing and storing of a material used in common by several widely separated mills under common ownership. The balance of expediencies seems to be fairly struck, and all the material and relevant facts seem to have been considered. No doubt the decision was a wise one. The case is the more interesting because on offhand judgment one might well expect the balance of advantage to turn out otherwise—as indeed it would in many superficially similar cases. This affords opportunity

¹ Fictitious name used for purpose of disguise.

for a sequence of problems with progressively changing relative emphasis inherent in the conditions.

January, 1926

J. G. C.

20. HUTCHINSON ENGINEERING COMPANY¹ I H.B.R. 110

COMMENTARY: This is a case antithetic to the Darrow Shoe Company case.² Here the plant was a machine-shop, and the inherent relations between costs of owning and operating a special parts department, and those of routing special parts through the main productive departments, showed a clear balance in favor of the former. This was partly because the special production involved was a fairly large amount for a machine-shop, while 30 or 40 pairs of shoes a day is not a shoe factory operation of any advantage. One recognizes a special case of a familiar thought of general application—that for any given manufacturing operation there is a scale below which competitive costs cannot be achieved, and that this minimum stated in dollars per year is strikingly different in different industries.

January, 1926

J. G. C.

¹ Fictitious name used for purpose of disguise.

² I H.B.R. 97; commentary, 2 H.B.R. 408.

21. THORNHILL MILL MACHINERY COMPANY¹ I H.B.R. 112

COMMENTARY: This is a study of the effect on inspectors arising from responsibility to one or another department. Allegiance to the production department tended to make the inspectors lax, in the interest of getting out a maximum parts production. When inspectors were attached to the assembly department where troubles developed because of inaccurate parts, the incentive was to tighten inspection. Further, the inspectors became the authoritative spokesmen for the assemblers, whose position had lacked authority.

It is interesting to consider what would probably have resulted had the inspection department been made directly responsible to the general superintendent. A chief inspector responsible only to the general superintendent is less likely to be influenced unduly toward laxity or undue strictness than is the case where the one or the other interest is represented by his chief. The general superintendent is likely to be interested impartially both in getting out quantity and in meeting quality standards.

¹ Fictitious name used for purpose of disguise.

It would seem that after the status of the assembly department had been somewhat improved through taking over inspection, a further change to responsibility to the general superintendent would bring about a better permanent organization than would either of the other arrangements.

May, 1926

J. G. C.

22. WAINWRIGHT CANNING COMPANY¹ I H.B.R. 114

COMMENTARY: The question of over- and under-equipment in a manufacturing plant is one frequently met, usually important, and commonly decided in view of many considerations. The case considered here illustrates how particular circumstances and relationships may cause one of the factors of the general case to become of paramount importance. In this case, the relation between perishability, shortness of season, value of a day's output of a machine, and cost of the machine assume unusual ratios, and the decision to have not merely enough machines to take full care of maximum output when the plant was working on one item, but to go further and duplicate this equipment for the sake of security, was undoubtedly a sound one.

In a more general case—say a writing paper mill working on bonds, linens, and ledgers—it would in most cases be sound manufacturing to have underequipment of finishing-room machinery in each line if figured on the unusual peaks where the orders in that line reach a highly unusual percentage of the total. In other cases, such as a repair department of an automobile factory, machine equipment would usually be enough for any peak of any specific requirement, but probably without spares as such, since in case of repair department breakdowns performance of the work could be arranged for temporarily outside the plant.

This case would assume its maximum usefulness as one of a series illustrating change of emphasis with conditions, as indicated above on page 408, in the commentary on the Markham Knitting Company case.

January, 1926

J. G. C.

¹ Fictitious name used for purpose of disguise.

23. BECKWELL MACHINE COMPANY¹ I H.B.R. 119

COMMENTARY: Probably the decision in this case was wise—it is impossible to be sure without knowledge of the personalities and the

¹ Fictitious name used for purpose of disguise.

scale of operations. An alternative would have been to give the toolroom man a clerk if the job of keeping up tool stocks warranted one man's time, and if the caliber, status, and mental characteristics of the particular toolroom keeper were of a certain sort; however, unless the plant were a very large one, and the toolroom man an unusual person, the solution chosen would undoubtedly be preferable. Usually men of moderate ability accustomed to highly skilled manual work, such as keeping tools in order, are not emotionally attached to clerical work. Probably there was no inference that the new arrangement constituted anything like a demotion for the tool man—certainly there should have been no such implication, since his enthusiasm and consciousness of the importance of his work must be conserved.

The recorded breakdown in production and the less important loss due to purchase of excessive tool supplies at high cost, sufficiently emphasize the imperative need of keeping a check on tools on hand. This is obvious; but sometimes it is less obvious to a non-technical management how great a factor in manufacturing costs and in morale there is in the difference between good condition and excellent condition of the tools that are given out, and how large a degree of skill and interest there is room for in the tool job. The writer lately heard from a successful manager of technical factories a vigorous arraignment of courses of action likely to be interpreted by the factory men as underestimates of their functions in comparison with those of the minor "white-collar men" who keep track of their activities. Very commonly the acts so interpreted did not carry the implication that was read into them—as the course outlined in this case would not; nevertheless, it is worth while to take tactful measures in such cases to make it clear that relative values are understood.

January, 1926

J. G. C.

24. LAFOLLEY ELECTRICAL MACHINE COMPANY¹ I H.B.R. 121

COMMENTARY: Operation of foundries and some other functional departments as independent manufacturing units has been fairly common; the self-contained character of the foundry suggests treating it as a separate enterprise. This case brings out the general point that recognition of the real facts is likely to result in sounder and simpler accounting and productive control than partly fictitious set-ups; at least the latter must show cause. It suggests the more general reflection that the potential sources of economy in large operations must be carefully

¹ Fictitious name used for purpose of disguise.

developed, since there are important sources of loss due to size, that develop themselves.

Some of the details in this case have an unfamiliar look—such as a major class of castings assembled unfinished into electrical machines, but this is undoubtedly due to the exigencies of disguise, and it does not affect the principle illustrated.

It would be interesting to record a case of a component unit in a composite manufacturing enterprise, where recognition of the facts would lead to billing parts from one plant to another—that is, to the opposite decision. There are many such cases, and those nearer to the line would be particularly interesting. The automobile industry gives numerous examples.

January, 1926

J. G. C.

25. SNELLING MACHINERY COMPANY¹ I H.B.R. 125

COMMENTARY: Significant facts found in this case are:

1. The simultaneous fabrication in different departments of parts which were later assembled in the finished product. This combination implies need for the centralized coordination of part production in order that assembly may not be delayed and inventories of finished parts may be minimized.
2. The presence of a control structure for regular orders involving complete centralization of planning, scheduling, and dispatching.
3. The presence of a considerable proportion of rush orders originating upon work in process.
4. The delegation of planning, scheduling, and dispatching of rush orders to foremen with permission to alter regular-order schedules when necessary.

The management was here confronted with an unusually difficult problem of production control owing to the large percentage of rush orders which *originated in process*. Despite the installation of a completely centralized form of production control, enabling changes in routing and scheduling to be introduced at any point during process, it is evident that such control was incapable of coping with the alterations in schedule resulting from the rush order, and it is clear that these adjustments were demanding too large a proportion of executive time and attention. The planning department, therefore, was forced to undertake the control of rush orders through the employment of departmental dispatch clerks.

¹ Fictitious name used for purpose of disguise.

On the assumption that the presence of rush orders of the type described was unavoidable, it would appear that in the interests of economy the duties of the central department should have been reduced to the coordination of *departmental* fabrication, that is, the distribution of orders to departments in terms of the departmental capacity over a given period of time, for example, a week's work assignment. This is sometimes termed "master scheduling."

The departmental control structure would then be held responsible for the determination of order-of-work, job preparation, and work assignment.

If conditions were such that precise scheduling (order-of-work) requiring considerable clerical labor was made necessary by the limitations of equipment, the desirability of providing excess equipment, making the scheduling sufficiently easy to be performed by the foremen, should have been considered against the clerical costs of more exact methods of control.

January, 1926

E. H. S.

26. OPAL KNITTING MILLS¹ I H.B.R. 128

COMMENTARY: Significant facts in this case are:

1. Parts were fabricated consecutively rather than concurrently prior to their assembly. Therefore, the centralized control of departmental activities was one involving the sequencing rather than the coordination of work in process.
2. Operation sequences were sufficiently fixed so that power to change the routing of parts in process was not a requirement of centralized control.
3. In the original system, the assignment of work to operators was not undertaken by the executives. Instead, the selection of the work was left to the discretion of the employees.

Production control in the Opal Knitting Mills was unusually free of complexity. The relating of plant capacity to specific orders was easily accomplished, as the company manufactured one-half of its product for stock. The fact that garment parts were cut conjointly and remained together until the assembly operation, eliminated the need of centralized *coordinative control*. The limited effect which variations in size had upon the routing introduced a further element of simplicity. The relative lack of urgency in product demand materially reduced the complexity of departmental scheduling or order-of-work. Job preparation was primarily concerned with the provision of

¹ Fictitious name used for purpose of disguise.

materials. The versatility of operators in any one department simplified dispatching.

It is clear, therefore, that the main responsibilities of production control in this case were:

1. The inducting into process of a sufficient volume of production orders and materials to permit the economical use of plant facilities.
2. The maintenance of balanced departmental capacities and output.
3. The determination and maintenance of a general order-of-work with emphasis upon products upon order.

It is interesting to note that the failure of employees to maintain the original order-of-work when using their discretion in selecting production orders was doubtless due in large part to faulty piece-rate setting which made certain tasks more attractive than others. Even when the assignment of work is carried on by the foreman and unbalanced rates are in use, it is difficult to maintain the original work sequences, as the executive apportionments to each operator during the week must be such that the employee receives a blending of high and low rates, resulting in an ultimately satisfactory weekly wage. This blending process introduces delays and changes into the schedule.

There is some basis, therefore, for believing that, had the rates been carefully established in equitable relation to one another, the tendency of employees to desire work out of sequence would have been lessened, that the foreman supervision over the flow of work would have been sufficient, and that the expense of the control board installation and operation could have been avoided.

Nevertheless, the assignment of work is an executive responsibility even though it may be delegated to a dispatching clerk, and the newer method employed by the Opal Knitting Mills represents one way of correcting a definite weakness in the original procedure.

January, 1926

E. H. S.

27. FELBER ELECTRIC COMPANY¹ I H.B.R. 132

COMMENTARY: The decision is in accord with the accounting principle which condemns interdepartmental profits. It is a maxim that "a profit can arise only in a sale"; only when an article has been sold to another person for more than it cost is there any justification for showing a profit. To assume internal profits is to introduce speculative and unreal elements into the situation. Moreover, such internal profits can be shown only by correspondingly writing up the value of

¹ Fictitious name used for purpose of disguise.

inventories in process, a form of inflation which is to be condemned.

The case indicates that, as might be expected, manipulation of the figures might have been resorted to if the strictly cost basis had been abandoned. The amount of interdepartmental profit to be allowed must be determined in some purely arbitrary fashion, and this in turn leads to other hypothetical assumptions. The objectives sought could be attained by setting proper standards of cost and production, without introducing fictitious profits. The inclusion of such profits would necessitate subsequent adjustments on the general office books, if inflated values in the published statements were to be avoided.

February, 1926

T. H. S.

28. VITEX CHEMICAL COMPANY¹ I H.B.R. 135

COMMENTARY: The first thing necessary is to separate the two situations. The salt cake, worth 80% of the main product, was really a joint product, and deserved special consideration; the nitre cake, worth 2% of the main product, was a true by-product. In the latter case it would make little difference which method was followed; probably the actual selling value would be credited to the manufacturing account, as the simplest and most definite method.

For the joint product it becomes necessary to consider the best method of computing a cost; it would not be satisfactory to credit the salt cake to the manufacturing account at its selling value, even if this value did not fluctuate widely. The adoption of a standard cost was the better of the alternatives offered in the case; but a still better basis, in view of the fluctuating selling value, would be to divide the total manufacturing cost between the main product and the by-product in proportion to their selling value. This would give a cost figure for both products, and would be a less arbitrary procedure than using a standard cost for one product, thus permitting the other product to bear all fluctuations in manufacturing cost.

October, 1925

T. H. S.

¹ Fictitious name used for purpose of disguise.

29. ASHCRAFT STOVE COMPANY¹ I H.B.R. 137

COMMENTARY: There are several methods by which designing, and similar developmental costs, may be charged against production; which

¹ Fictitious name used for purpose of disguise.

of these is suitable will depend upon the circumstances of the individual case.

1. All such costs may be charged against the period in which they are incurred, being included in the overhead of the period. This, of course, has the advantage of accounting simplicity, but it is justified only if expenditures are fairly uniform from one period to another, and if there are no great differences to be noted between different models or products. In other words, this method frankly abandons all attempts to allocate these costs to the objects for which they were incurred.

2. Designing and development costs may be charged to an asset account, which will then be amortized over the period during which the expenditures are expected to be of service, upon some basis deemed to be suitable in the case. Thus:

(a) A certain fixed percentage of the development costs may be written off each period. This method has the advantage of equalizing the charges over the various periods, but makes no differentiation between development costs of different products.

(b) Instead of charging each year with a fixed percentage of the development costs, a percentage of sales may be taken as the annual amount to be charged against operations and credited to the development account. This has the advantage of amortizing these costs in proportion to the business done; but still there is no allocation of costs to the specific products for which they were incurred.

(c) Development costs may be divided into groups, relating to the products for which the development work was undertaken. An estimate may be made of the volume of sales which each of these groups of products may be expected to show within a certain conservative period. The proportion between the development expenses incurred for any one product, and the estimated sales of that product, may then be computed, and from this there may be determined the amount of development costs to be charged to every unit of product.

In choosing one of these methods, consideration must be given to the nature of the development work. A very large plant will carry on some research which is of the most general investigational character, aiming simply to advance knowledge of certain phenomena, without any present conception as to the industrial applications of such knowledge. Other research may be undertaken which is expected directly to improve a specific product, and is unlikely to be of service to other products. It is at once obvious that the first class of expenditures mentioned can be regarded only as a part of general overhead, to be prorated over the entire output of all products; whereas expenditures

undertaken for specific products should be so segregated that they may afterwards be charged against income from those products.

In the case of the Ashcraft Stove Company two principal questions arise, namely: (1) Were the total design costs fairly regular from year to year? If they were, there was much to be said for the existing simple practice of charging these costs into the overhead of the year in which they were incurred. (2) Did the design costs greatly vary as between different stoves, to the extent that it was worth while to keep account of designs of separate models? One possible use of such figures is that they would bring to light cases where the resultant income had proved to be insufficient to justify the expenditure upon the design. Some idea would be obtained as to the limits beyond which it was unwise to go in design costs for individual models. With only two or three new designs each year, involving design costs of \$20,000 to \$30,000, the average cost of a design would be \$10,000. It should be worth while to keep record of individual design costs, and to amortize these against the respective sales.

The statement that "occasionally a pattern was made up and a stove added to the line the continued manufacture of which would have been undesirable if the direct cost had included pattern and design charges" is not very convincing. After the development work had been completed, the cost of it could not affect the desirability of continuing to make that model. So long as the model could be sold at a price which would pay for its manufacturing cost and make some contribution to the development cost, it would be profitable to continue it.

February, 1926

T. H. S.

30. ADVANCE STATIONERY CORPORATION¹ I H.B.R. 139

COMMENTARY: The Advance Stationery Corporation case is one in which an item of cost commonly treated as overhead, and therefore distributed by arbitrary proration, was regarded as of sufficient importance to be made the subject of a special direct charge to the cost sheets for individual jobs. Two conditions are usually necessary to make it both desirable and possible to deal with an item regularly in this way; first, it is not worth while to do it unless a considerable amount of money is involved, and second, it must be possible to measure with some exactness the charges to be allocated to individual orders. These conditions were well satisfied by the inspection expenses of the Advance Stationery Corporation; operations which involved 10% of the total pay-roll, and which occupied up to 50% of the floor

¹ Fictitious name used for purpose of disguise.

space in some shops, were certainly of sufficient importance to merit special treatment, and, since the work on each order was inspected as a unit, a proper inspection charge to each order was as easy to ascertain as were charges for the manufacturing operations proper.

The plan of gathering all inspection charges into one department set up for accounting purposes, even though the operations take place in several different manufacturing departments, is not an unusual device in cost accounting. Only one question may be raised here, and that question doubtless may be answered satisfactorily. If the several sections of inspection work, located in different departments, used different amounts of equipment, and occupied varying amounts of space per inspector, then a single uniform charge for overhead, proportioned to the direct wages of the inspectors charged to the order, might not be sufficiently accurate. In the case of the Advance Stationery Corporation, it is not likely that the differences in this respect merited attention, but in other cases it might be necessary to compute separate overhead rates for different parts of the inspection work.

June, 1926

T. H. S.

31. BANDAR RUBBER COMPANY¹ I H.B.R. 141

COMMENTARY: The loss on this grinding machine, caused partly by breakage and partly by supersession, amounted to 77.5% of its original cost—a high proportion of loss. Considered in relation to the aggregate investment in plant, however, an item which represented only 1/10 of 1% has practically no individual importance; it becomes significant only when considered as an example of many similar occurrences, involving much greater sums.

There was no justification for carrying this machine in the plant account any longer; it should be written off. The strictest view would involve charging it to surplus; since inadequate depreciation had been provided during past years, the profits of those years should be debited with the loss. As a practical matter, however, income tax considerations alone would determine that it be charged against the operations of the year. This also would be justifiable on general principles if such losses were frequent, as they would be likely to be in so large a plant. An account, "Losses on Abandoned Equipment," would be kept on the ledger to receive such charges; any profits due to the sale of old equipment for more than its book value would be credited to the same account, the net total of which would be one of the usual annual operating charges, additional to the charge for repairs and maintenance.

¹ Fictitious name used for purpose of disguise.

This procedure is followed by steam railroads in handling abandoned property, the account prescribed by the Interstate Commerce Commission being termed "Retirements"; one of these accounts is prescribed for each principal class of equipment.²

It should be observed that the difficulty in this problem arose in part from the fact that detailed depreciation records had been kept, showing a specific provision on each item, or group of items, of plant. When this provision does not equal the original cost less salvage value, at the time of abandonment, there is no escape from the necessity of writing off the difference. The situation would be otherwise if a blanket provision for depreciation had been made on the entire plant; losses on the abandonment of individual items might then be charged to the reserve for depreciation, provided they were there offset by gains on assets which lasted longer than the estimated lives on which they were depreciated.

February, 1926

T. H. S.

² See *Classification of Operating Revenues and Operating Expenses of Steam Roads Prescribed by the Interstate Commerce Commission*, Washington, Government Printing Office, 1914, pp. 61ff.

32. RITCHEY MACHINE COMPANY¹ I H.B.R. 143

COMMENTARY: The objective sought in this case was the current analysis of salary expenses of district sales offices to assist in control of expense.

The company distributed its product throughout the United States from 16 district offices. It will be presumed that a responsible manager was in charge of each branch. Standard expense classifications were used in all districts, with the result that the data were compiled in a uniform manner.

The statistical problems were: (1) selection of data, and (2) the choice of significant comparisons to aid in control.

Analysis of the case will depend upon interpretation of the words "monthly statistical analysis of the pay-rolls of its 16 district offices" as contained in the first sentence. If this was intended to mean a brief analysis to take the form of a summary report for information of the executives, one set of reasons will apply. If it was intended, however, to mean a full statistical analysis the detailed results of which would constitute part of the routine operating control, a different set of reasons will be needed. In the absence of a statement as to which

¹ Fictitious name used for purpose of disguise.

was intended, the case will be discussed from both points of view. The detailed analysis will be considered first.

Data for salaries were available in the form of pay-rolls by months and accumulations for the year to date. In the standardized accounts, pay-rolls for each district were classified into selling force, order service, accounting and financial, stenographers and typists, engineering, warehouses, and others. Since the pay-rolls contained the names of individuals, the numbers of employees in each class also were available.

Since these data were sufficient for many kinds of comparisons, the selection of data to be used would depend upon the comparisons desired. The case emphasized the desirability of studying trends and of subordinating temporary changes. Upon the presumption that a responsible manager was in charge of each branch, the kind of control desired would be that which would prevent branches from creating permanent maladjustments and would make little attempt to govern current temporary payments. Monthly fluctuations should not be neglected, however, so the comparison should be of that type which would emphasize trends yet would show current conditions.

A period of one month was so short that monthly data would fluctuate with exceptional temporary conditions; hence reliance could not be placed upon comparisons of individual months. It is customary to compare monthly data with those for preceding months and with corresponding months of preceding years. Such comparisons always are useful; but it must be borne in mind that figures for adjoining months show temporary or seasonal variation, and that comparisons with corresponding months of preceding years involve long-time growth and fluctuations arising from the business cycle. Mental allowances may be made by the operating official, however, for these factors when their magnitudes are known even approximately. The comparisons then will become reliable. In this case, all figures for separate months were discarded because it was desired to subordinate monthly fluctuations and to emphasize trends.

It was recognized that cumulative data, on the other hand, would contain the figures for actual months, but temporary fluctuations would be spread over all the months in the total; hence their influences would be reduced. It was decided that cumulative data would be more reliable and would permit significant comparisons so as to disclose trends. Comparison would have to be limited to the corresponding periods of preceding years; it was decided to use the period of only the last preceding year. It would have been more significant to include the second and perhaps even the third preceding year—one year is too short an interval to indicate trends reliably. The word "trends," as

used in the case, should be construed to include cyclical fluctuations as well as secular trend, in contrast with the dominance of seasonal variation which would have resulted from using figures for separate months.

Since it was recognized that there were different sizes of salaries present in the figures, the possibility of using an average salary obtained by dividing total salaries by total number of employees as an indication of average trend was considered. Because, however, such a figure would not disclose causes of changes, that step was rejected. There was an additional objection from a statistical point of view: such an average salary would be practically meaningless because of the dissimilarity of the salary classifications which would be included in it.

It was decided to analyze each salary class to show the movements caused by changes in rates of pay and by changes in numbers of employees. Changes from the corresponding period of the preceding year caused by variations in rates and in numbers then were shown in dollars and percentages. This was a sound step.

The only comparison was with the corresponding period of the preceding year. Since the preceding year's performance could not be considered any better as a standard than the current year's performance, there was virtually no attempt to compare current figures with a standard. The only possible result would be the indication of a change from "last year" to "this year." A significant measure could have been constructed by relating salaries to sales. Study of these results over several years then would provide a basis on which to set a standard; comparison of the current ratio with this standard should prove helpful.

There is some question concerning the most desirable length of period for cumulative figures when the accumulations are begun afresh each year. The periods will vary in length from 1 to 12 months. Cumulative figures for the early months of the year will contain such short periods that monthly changes may have marked effect; those for the later months will contain such long periods that monthly changes may become submerged. Since it is customary in business to think of accumulated expenses as from the beginning of the year, it would be a mistake to abandon this kind of accumulation. Better results could be secured, however, by supplementing these figures with another accumulation—that for a period of fixed length; 6 months, for instance, would be a convenient average between 1 month and 12 months. Accumulations for the last 6 months, constituting moving totals, then would be computed and comparisons between figures for corresponding periods would include constant lengths of time. If this were done, the comparisons could be amplified by introducing figures for the separate

months. There would be no danger of being misled by the seasonal variation or accidental differences in the monthly figures because the moving totals would be at hand. This treatment would show movement by months and by 6 months' periods. If, then, these figures were related to sales and the results thereof were compared with standard ratios already established, a complete and useful picture of salary expense would be obtained.

The question of expressing the accumulations as those of fixed lengths—moving totals—or of beginning afresh with each calendar year would depend largely upon the desires of the executive. From a statistical point of view, it would be better to express these accumulations as moving totals, say for 6 months, in order to obtain homogeneity for comparison with preceding periods. Since in a short analysis of this character it would be advisable to include only one kind of accumulation, probably that selected by the company was the better choice because it displayed the figures in a way which would be self-explanatory, and was in accordance with the business practice of looking upon expenses as starting anew each year.

For the data selected, comparisons among districts by dollars alone would be meaningless because no allowance would be made for differences in numbers of employees; comparisons of percentage of changes might be helpful but only to the degree that changes without relation to standards could be useful.

The data for dollars and numbers of employees could be plotted by districts on a log scale graph. The relative movement of figures then could be seen since, obviously, the amplitude of movement would be subordinated to relationship of movements among the several curves.

In the preparation of a summary statement for information to the executives, the same process of reasoning should be applied, and then a few of the essential comparisons should be selected so that the picture presented would be one of broad but accurate perspective rather than one of details.

From the point of view of length and content, Table 29 is probably quite satisfactory, with one exception. Comparison with the same period of the preceding year was sound, but it would be desirable from a statistical point of view to provide for comparison with earlier years as well. Since in such a summary analysis the fewest outstanding figures and comparisons should be shown, it would be necessary to restrict any such earlier comparison to the barest mention of data for perhaps the next preceding year. Great care would have to be exercised not to introduce so many figures as to destroy the perspective of the analysis, but numbers of employees and salaries for the second preceding year could be included solely for the purpose of helping

appraise the situation of last year. All itemized comparisons should be restricted to last year, just as shown in the present form. In view of the fact that trends were to receive emphasis, the display by cumulative figures only was sound.

The analysis of the increase into those elements caused by increase in salary rates and increase in number of employees was brief and effective. It is to be presumed, however, that such analyses would not be restricted to increases, but that provision would be made for exactly the same kind of data when there might be decreases. Continuous increase could apply only when the secular trend within the business was so strong that it overcame all cyclical influences. Even if this happened to be true under the conditions pictured in the case, such a situation could not be expected to continue permanently, and provision should be made for analysis of every change whether it be an increase or a decrease.

A. J. H., JR.
C. B. P.

April, 1926

33. AMPERTON COIL COMPANY¹ I H.B.R. 146

COMMENTARY: The alternative in this case was between charging the excess labor costs to the product as direct labor, and including them in the *departmental* overhead. The expression "general overhead" apparently means general overhead of the department, though the statement on this point might be made more specific.

The extra labor costs are not quite correctly described by the words "inefficiency," or "spoilage." If it is true, as stated, that the labor market was such that this operation must be done in part by boys at low wages, and in part by men at higher wages, then, broadly speaking, the direct labor cost of the entire output of the coil-winding department was the sum of the wages paid to men and boys, and the average cost per coil was this total divided by the number of coils wound. If this average cost were charged to the product and credited to the wages account, there would be no balance remaining in the latter, unless more than the usual number of men were employed at the higher wages.

But the case states that the standard piece-rate per coil was based on the wages paid to boys, and that this piece-rate was the direct labor charge to the product. From this it may be supposed that it was hoped and expected to get all the work done at this rate in the near future; in that event the present treatment of the item was reason-

¹ Fictitious name used for purpose of disguise.

able, since it represented only a temporary condition, for the excess charge would disappear when all the work was done by boys. But if the labor market was such that the employment of men was likely to be a permanent feature, then it would have been better frankly to recognize the higher labor cost per unit, and to charge that figure to the product.

It should be observed that this question involves no difference in the total cost of the product, since the overhead was distributed on a labor basis. But the fact is that this cost was a direct labor cost, and not an overhead cost; its treatment would be determined largely by the probability of its permanence.

February, 1926

T. H. S.

34. DUNKER MOTORS COMPANY¹ I H.B.R. 147

COMMENTARY: The Dunker Motors Company, although faced by declining sales, did not reduce its productive capacity in equal degree, because it desired to afford employment to as many of its workers as possible. Although that motive was praiseworthy from the standpoint of the employee, the policy based upon it weakened this company's endeavor to survive during a period of business depression.

One unfortunate aspect of the policy from an administrative standpoint was that it invested raw materials with higher conversion costs than if the production program had been curtailed drastically at once. Wage-rates had not been reduced, and the cost of supplies and fuel were in the process of decline. Then too, the storing of finished automobiles was more costly than the storing of raw materials and parts. Work done at night usually is more costly than work done by day. The continuance of the night shift for six months after sales failed to keep abreast of productive capacity was an error. It was not necessary, furthermore, to retain all workmen for six months after September, 1920, on the ground that the organization should be maintained. Tendencies evident during that period indicated that the organization which had been built up prior to September, 1920, was too large for normal requirements. Its reduction to a size sufficient to meet estimated normal demands certainly was justified. The company's policy retained for six months many semiskilled men who might have been replaced at a later time when production was increased. Excepting men costly to replace, a low turnover is not desirable under the conditions set forth in the case.

The shorter work periods imposed after January 1 were intended to

¹ Fictitious name used for purpose of disguise.

divide available work among as many employees as possible, particularly in view of the season of the year. Later, when work on the farms and in the building trades became available, the company rightfully felt less of an obligation to retain an overmanned work force. The three-day work-week apparently afforded an income so insufficient that it demoralized the wage-earning employees.

January, 1926

J. W. R.

35. MANDEVILLE SHOE COMPANY¹ I H.B.R. 150

COMMENTARY: Since the Mandeville Shoe Company manufactured to order, no problem arose in the latter part of 1920 as regards the scale of its manufacturing operations. The production program was geared directly to the volume of orders sent in by the salesmen. In this respect, this case is quite different from that of the Dunker Motors Company.²

The buying motives of retailers had changed in the brief period since business optimism had prevailed. Retailers no longer were buying shoes in anticipation of a price advance; they merely were filling customers' orders and buying on a hand-to-mouth basis. While shoe prices tended downward, the bases of appeal usable by salesmen selling directly on retailers' orders were, especially, prompt deliveries, style, quality of materials, and good workmanship, in addition to the more usual appeals of price and credit terms. The Mandeville Shoe Company had to adopt production policies that would contribute to these marketing appeals.

The company had an advantage in its direct selling policy. It could offer new patterns and fill orders for them promptly. The system of royalties on machinery in the shoe business, under which a manufacturer paid a stipulated sum for each pair of shoes processed in machines rented to him by the machinery manufacturer, and the relatively large share of manufacturing costs that was expended for materials and labor, rendered curtailment of production less costly in that industry than in many others. On the other hand, the size of stocks of raw material carried over from the previous period of high prices by the shoe manufacturer was a critical factor.

The company's decision to lay off approximately one-half of the direct labor force was dictated by the then existing circumstances. In the interest of better workmanship and reduction of waste, the less capable men no longer were desired. The morale of a force working

¹ Fictitious name used for purpose of disguise.

² I H.B.R. 147; commentary, 2 H.B.R. 424.

half-time is poor, because of the inadequate income of its members. Under the piece-work system, effective in this plant, quarrels sometimes arise concerning the allotment of work to individuals when short-time operations are carried on. Each man then wants "his share" of work. By running the factory every day, more prompt deliveries could be given retailers than by running it three days per week. Running the factory six half-days per week would have been costly because the "start up" period, during which the flow of work is established and the workmen's efficiency increases with repeated effort, would have taken up too large a portion of each working session. This lag in attaining working effectiveness is especially true of workmen who operate, not tend, machines. The output of much shoe working machinery really is limited by the skill and strength of the operative.

The reduction of manufacturing costs in this case was to come about chiefly in reduced prices of raw materials, in the economical use of those materials, in fewer "seconds" in the course of manufacture, and in the lowering of the piece-rates paid to direct labor. The effect of various plans of short-time operation upon indirect labor costs was a relatively minor consideration.

January, 1926

J. W. R.

36. MIXNER BRASS COMPANY¹ I H.B.R. 154

COMMENTARY: Time study consists of two distinct parts:

1. Recording the facts as regards operations and times as they occur;
2. Interpreting these facts, including the determination of allowances for rest and for unavoidable delays, in order to arrive at a standard or allowed time.

It follows that if maximum permanent use is to be secured from the results of time study, these facts should be kept as distinct as possible from any interpretations which must necessarily be made.

A procedure commonly found satisfactory in rate-setting is first to make a delay study, which is an investigation of all matters which interfere with high production. This is not time study in the true sense of the word, but, of course, involves taking general account of the time element so that all such delays can be converted into terms of cost. With this as a basis, the extent of resulting standardization of these irregularities may be fairly accurately determined. Then comes the elementary time study, which in the industry described in this case should ordinarily be a detailed study of each element of work, carried

¹ Fictitious name used for purpose of disguise.

on to the point where the observer is reasonably sure that he has sufficient observations not only to give a fair time but also to catch any tendency towards connivance on the part of the workmen studied. This usually means not less than 15 complete observations of each operation. The importance of detecting employees' connivance before wage schedules actually are set, is indicated forcibly in the case of the Stanway Manufacturing Company.²

With these studies as a basis, there follows the operation of interpreting them so as to arrive at a standard or allowed time which under the particular circumstances will be fair to all parties concerned. This is where the judgment of the time-study observers may and must come into play, since the art of time study has not advanced to the point where definite laws have been evolved for determining the amount of rest and delay allowances.

Since constant investigation is resulting in more and more refined methods of determining proper rest and delay allowances, the original time-study data should be so arranged that on the basis of the facts as presented revisions may be made in the interpretive part of rate-setting, according to additional knowledge gained from time to time.

The soundness of the decision in this case, therefore, would rest upon the adequacy of the relative amount of scientific data separately recorded, and of the opinions of observers. Provided that a satisfactory balance of this kind was maintained, the practice of recording observers' judgment as to how long work should take, as followed in this case, is in accordance with what even the most expert time-study men must do.

December, 1925

H. H. F.

² 1 H.B.R. 170; commentary, 2 H.B.R. 435.

37. MENTLEY AUTOMATIC DEVICES COMPANY¹ 1 H.B.R. 159

COMMENTARY: The intensity of the analysis which should be made of any problem depends upon the conditions under which the problem arises and the purpose for which the results are to be used. The possible effect of the solution on labor relations, moreover, should govern the refinement necessary, and "time study," which is a means for the analysis and measurement of the time which any given work takes or should take, inevitably leads directly into vital questions of human relations in industry.

As ordinarily used, it has for its principal objects:

1. Detecting delays and improving working conditions;

¹ Fictitious name used for purpose of disguise.

2. Determining more accurate times for scheduling;
3. Measuring the performance of individuals and of groups of individuals;
4. Rate-setting and incentive payment.

The analysis may vary in intensiveness all the way from a consideration of averages of past times actually taken, through what is known as "overall" time study, up to a very scientific analysis and measurement of each small element and motion by means of "elementary" or "unit" time study. Such studies may be made by workmen as they work, by a selected workman assigned for this purpose, or by an expert time-study man who has had years of training and experience in his trade.

The total situation here seemed plainly to call for a study which dealt in fundamentals. The extent to which the first object of time study—detecting delays and improving working conditions—entered here is not clear. This is a work which at best is never finished, however, and it is a safe assumption that the Mentley Automatic Devices Company shared the normal need of standardization. Certainly, however, the second object—that of determining more accurate times for scheduling—was important, and in such an industry the economic advantage of elementary time study by specialists in this work is strongly apparent, because there is continuous need in such cases of being able to build up standard times for new products or new combinations of processes—a need which can be met at least expense by having the original studies deal with small elements common to the work of the shop in general.

Most important of all, however, the study is directly for the purpose of rate-setting and incentive payment—a process that vitally affects the workmen individually and as a group, and the rock upon which many industrial ships have foundered because of slipshod and inaccurate determination of standards upon which, as in this case, the resulting measurement of individuals and departments is based. The work leading up to the establishment of such standards is not a job for a novice, neither is it a job solely for one trained simply in the technique of time study. Both experts are necessary, the expert mechanic who knows the details of his trade cooperating with the expert analyst who has ability and experience, in recording and analyzing the results of their work and arriving at the proper answer. In no other way can assurance against later discontent and possible labor trouble be provided for.

It follows that the safest as well as the most economical course in this case would have been to have detailed, elementary time studies

made by time-study experts of wide experience cooperating with the workmen whose confidence had been earned.

October, 1925

H. H. F.

38. HATELY WOOD-WORKING MACHINERY COMPANY¹

I H.B.R. 162

COMMENTARY: The purpose sought in this case was the establishment of standard times for shop operations by analysis of records of past performance.

The company was a manufacturing concern which employed 475 skilled machinists and which produced a wide range of wood-working machines of high quality. Workmen were paid by hourly rates; no steps ever had been taken to introduce piece-rates, and none was contemplated. Detailed cost records for all the several thousand operations were on file according to designated numbers assigned to the different operations. These records constituted the data which were to be analyzed in the establishment of time standards.

From a statistical point of view there were five problems: (1) selection of data, (2) compilation of data, (3) selection of averages, (4) current adjustment of standard times, and (5) current comparisons with standards.

1. *Selection of data.* The decision to select data from the operation records for the last five years only, probably was on the basis that it would be unfair to use earlier records because improvements in processes had caused earlier records of time consumed to become inaccurate for current conditions; also upon the principle that a five-year sample would be representative of those operations for which the processes were essentially unchanged. The latter reason was sound, but there is a question whether it would not have been better to limit the sample to stated numbers of performances instead of using a flat time limitation for all performances regardless of their frequencies. The former method of sampling would have permitted specific recognition of changes of processes within any operation; only those records since the last significant change would be included. Since there is no reason to suppose that some changes had not occurred within the last five years, it was dangerous to assume that only changes prior to the five-year period should be ruled out. Within this time limitation, nevertheless, all data for each operation were included in the study.

2. *Compilation of data.* A clerk was instructed to transcribe upon

¹ Fictitious name used for purpose of disguise.

cards the actual times spent on all the different operations. A separate card was prepared for each operation and upon it were entered all the times required for all individual performances of this operation during the last five years. Thus those operations which were frequent would have a great many items on their cards; those which were infrequent would have relatively few items, sometimes perhaps a very few in actual count. The record of times for each operation consisted of an enumeration of all performances; thus the card for each operation became a complete and itemized list of all time consumed by separate performances.

The record shown in Form 19 should be taken as typical; either it is an actual record of an infrequent operation performed only seven times in four years, or it is but a few sample items of a long record shown only to illustrate the method of computing the average.

The entry of the employee's name for each performance was unnecessary. These records were used solely for the purpose of establishing averages, and individual men were not factors. Much expense could have been saved without change in the results if the names had been omitted. There was some benefit in entering dates, but undoubtedly if the items had been entered merely by months, the results would have been as useful; the expense certainly would have been reduced.

3. *Selection of averages.* Only one form of average was used—the arithmetic average of items excluding the extreme values. In Form 19 it is obvious that the item excluded was done so properly; in other cases, the extreme items would become so by gradual gradations, and it would require skilful judgment to determine at which points the items became extreme. Where the items were few, the average of the middle items in a given number or percentage of total items should have been taken; this automatically would exclude the extreme items, irrespective of their magnitudes. For this kind of selection the items should be arranged, or at least considered, in order of magnitude. In this case, the troublesome extreme items would be those of large magnitude; it would be defensible to include all the small items, although perhaps in fairness to the men, all unusually large or small items should be excluded. Another point to be considered in this respect would be the upward bias of the averages through failure to give full weight to improvements in processes during the five-year period. Hence, a working rule for short lists of items, say under 50, would be to arrange them in order of magnitude, to exclude a tenth or a fifth of the largest items, likewise a comparable proportion of the smallest items. Where the items were more numerous, there would be a better opportunity for choice of averages. If a pronounced mode should be found, that probably would be the most useful average because it would represent

the common time. Failing a satisfactory mode, the median or an arithmetic average, after excluding extreme items, should be used, depending upon judgment exercised under the circumstances.

In any case, the average would be representative of the items in accordance with the degree of concentration around it; conversely, it would be non-representative in accordance with the degree of dispersion of items from it. The ascertainment of different kinds of averages would have increased the expense. The most economical treatment was the computation of the arithmetic average after excluding the noticeably extreme items—just as was done in the case. The use of the other forms of averages would be justified only if it were shown by tests that their greater accuracy was worth the additional expense.

4. *Current adjustment of standard times.* On each operation card containing the times of performance during the last five years there were entered also the times of performance in current operation; that is, these records became routine listings of current performances. From these current records new averages were computed every six months. This was desirable, as the new averages would reflect changes in time required resulting from changes in materials, qualities of finished work, or methods of operation. It was not stated whether these new averages were to be for five-year or six-month periods. Probably the frequency of performance was a factor here; undoubtedly, a short period would be sufficient for frequent operations and a longer period would be necessary for infrequent operations.

5. *Current comparisons with standards.* Up to this point all records and computations had been by operations regardless of the rotation of men on different operations. To obtain a comparison of each man's performance with the standard of each operation, a set of records of current performances by men was instituted; thus each man was assigned a page on which the cost department entered from the "Operation Time Card" (Form 18) the actual time consumed and the standard time as determined from the average already computed. Here, however, if there was an unusual excess of time consumed which the foreman could account for by the breakdown of tools or machines or by lack of materials, the posting was omitted. Apparently, the purpose of this record by men was to display only the excesses of time consumed; thus savings in time were not entered, with the result that the record was one-sided. Even so, there always was present the necessity of determining what times were excessive enough to require reports from foremen. Since the obtaining of such reports was an act of judgment upon the part of the clerk keeping the record, undoubtedly many errors resulted; slight excesses which could have been explained

so that they should not have been posted actually were posted. This would result in biased information against the men. It would have been better for each foreman to endorse the operation time cards when unusual conditions were present so that the clerk could appraise the situation as part of the routine in posting. This would have facilitated his exercise of judgment and would have reduced the bias.

The historical record for the past five years merely was a transcription of actual experiences without any attempt to recognize changes in operations within that period arising from changes in materials, qualities of finished work, or minor changes in methods of operation which might have reduced the time required for their performance. Probably revolutionary changes would have been recognized as new operations; hence, they would have received their own identifying numbers by virtue of which their own standards would be established. Within the old numbers, however, probably there were many minor improvements in conditions not sufficient to justify new operations, but the influence of which would be to reduce the times required for performance. Since these reductions would not be given full effect in the averages, the standard times would tend to be too high. This would encourage inefficiency in current performance, especially as there seemed to be no provision for recording savings in time. This fault would disappear, however, as new standards were computed; the error would be corrected with experience. The lengths of the periods included in recomputations of averages would be a material factor in the speed with which erroneous standards would be corrected.

If the purpose of the standards and the comparisons of actual performance with standards was merely to indicate where excesses were occurring so as to permit their reduction or elimination, the method of reporting excesses only might work hardships upon some men. A competent man might consume an excessive time on one performance only to make it up by savings on others. Under such conditions, the method of reporting excesses only would fail to disclose his true merit.

If, on the other hand, the purpose of the standards was to measure the efficiency of workmen both individually and by departments, the method followed was still defective. That this was the real purpose appears reasonable from the fact that the factory superintendent used the departmental reports to check the relative performances of departments.

The method followed created a one-sided record against the men—savings in time which might offset excesses were not recognized. There seems to be no justification for continuous penalties without credits for good performance; if the reliability of the averages is assumed, there

should be substantially as much time saved as lost. Under the conditions obtaining in the case, the probabilities were that there would be greater savings than excesses because the standard times were too great through the failure to give full weight to minor improvements which would tend to reduce the average times required. The monthly report by departments should have shown, therefore, each man at his actual performance by displaying separately his savings and excesses with the final net result—a saving or an excess, as the facts might disclose.

The expression of each man's showing in actual hours would be misleading if there were any appreciable differences in the numbers of hours worked during the month by the several men. Since the number of hours worked constituted the basis of actual efficiency in respect of departures from standards, it would have been preferable to express the results as relatives of the hours worked. This would have yielded a percentage of saving or excess for each man.

The expression of the results of each department in actual hours was subject to the same objections cited for the records of the men. There is this added point, however, that the total man-hours worked in the same department for different months, or in the several departments for the same month, would be more likely to vary than would the number of hours worked by each man. There was more reason, therefore, for expressing the time saved or lost by departments as relatives of the total man-hours worked than by individual men. This procedure would have provided comparable figures for successive months in any one department and for the same month as well as for successive months among all the departments. The compilation of the figures on this basis would be simple, as all the time worked would be the sum of the consumed times already recorded on the operation time cards.

The system of recording was simple; each man's time was classified by the number of operations which carried its own standard. It made no difference, therefore, whether men were kept on the same operations or were shifted from one to another. Each operation was reported separately and compared with its own standard; the total result was merely the sum of the elemental figures. This simple method would apply to the expression of results in terms of total hours worked to obtain percentage figures.

The form of the results apparently was satisfactory as a means of reducing excess time. There is doubt, however, as to the fairness of a one-sided record. If the records were maintained in detail for both savings and excesses, summarized figures in actual hours and in percentages of total hours worked could be presented currently. Although this would constitute an enlargement in effort, hence an addition to ex-

pense, it is believed that the greater usefulness of the results would far outweigh the slight additional cost.

May, 1926

A. J. H., JR.
C. B. P.

39. LITTLE PIANO COMPANY¹ I H.B.R. 168

COMMENTARY: It has been the general experience that thorough standardization, by which is meant the determination and maintenance in practice of the very best facilities and methods of performing work, coupled with carefully kept records of the individual man, is a more effective stimulus to high production than is detailed time study where the first two measures are not employed.

In this case there was a lack of full cooperation on the part of the workmen. Several officials believed that the cure lay in accurate time study for rate-setting. On the other hand, however, it is reasonably clear that working conditions had not been given detailed attention and that until this was done, strictly set rates would serve only to accentuate the difficulties already encountered from lack of standardization, thus further increasing the present lack of cooperation.

As indicated in the commentary on the Mixner Brass Company,² a study of delays and their causes is frequently advisable, and such a study might have been made with advantage in the present case. The cost probably would have been much less than the \$7,500 estimated as necessary for making time studies. If a careful study of all causes of delays had been made, if this study had been followed by careful standardization of all features of performing work so that unnecessary delays would not occur, and if each workman had been made to understand that his individual work was being watched and recorded, it seems probable that the Little Piano Company could have secured higher production and better morale at a small fraction of the cost of the detailed time studies.

The preferable procedure for the company, therefore, would have been: first, to make delay studies; second, to cure all preventable causes of delay, and to maintain the best possible working conditions; and finally, if it should then seem necessary, to follow these measures with detailed time study in order to set rates more accurately and secure the small remaining possible pick-up in production.

April, 1926

H. H. F.

¹ Fictitious name used for purpose of disguise.

² See page 426.

40. STANWAY MANUFACTURING COMPANY¹ I H.B.R. 170

COMMENTARY: The critical question in this case was whether the company's general piece-rate guaranty policy should extend to standards influenced by fraud on the part of its employees.

The increase of output made by these workmen, considered in the light of their previous action to limit output, supports the belief that they deliberately deceived the time-study man. Calculations based on the facts presented in the case indicate that this group of employees processed 80% more material after the standard was revised than before the first standard was fixed.² On the other hand, these results show that the supervisors were negligent or had unwarranted faith in employees whose previous action should have aroused suspicion.

If each task could be regarded as a segregated problem, a company might adhere to a piece-rate set in error. Even though the operative would turn out a larger number of pieces in a day, the labor cost per piece would remain constant.

As a matter of fact, tasks cannot be considered independently. Excessive earnings on one job, the result of erroneous standards, cause dissatisfaction among other workers who are at a relative disadvantage. A piece-rate guaranty tends to prolong such discrepancies, as well as to maintain rates that have been set accurately.

A piece-rate guaranty obviously cannot apply to rates set too low. They must be revised; otherwise, employees would leave or become grossly dissatisfied with their work.

A piece-rate guaranty assumes that the only important variable associated with the task is the diligence of the employee, and that the promise of higher earnings should call forth increased effort. The significance of a piece-rate guaranty is that the employees under it can give play to their abilities without fear that after they increase their earnings the rate will be cut. A piece-rate guaranty may injure employee morale, however, if it applies to rates set in error.

To remedy a situation such as the one here outlined is difficult. The company sought some new method of doing the work, so that these rates could be applied no longer. The rates might be effective for a long while before that solution was found.

¹ Fictitious name used for purpose of disguise.

² The assumption is made that the base rate was 50% of anticipated earnings, and that the balance was the product of output multiplied by piece-rates. The expected total weekly wage was \$35, or thereabouts. Piece-rate earnings yielded one-half that sum, or \$17.50. The personal base rate was the other half of \$35. The standard output multiplied by the piece-rates was to yield approximately \$17.50, but actual output multiplied by those rates yielded \$32.50 (\$50 — \$17.50). Therefore, the production standard was to the actual production as \$17.50 was to \$32.50, or 100 to 185.

The outsider is led to question whether adequate preparatory standardization of equipment and methods, a careful study of processing delays, and a review of the production records of these men antedated the setting of these standards. He also may question the capacity of the department head who, no doubt, reviewed the production standards set by the time-study division.

The five men to whom the erroneous rates applied had endeavored previously to limit output. To have insured against another attempt, the time-study man might have made a special delay study of each workman in the group. Restrictions of output often are revealed by that process, since individuals delay in different elements of the task or in doing different portions of related work.

The smaller the number of workmen in a group, the greater the possibility of collusion among them to deceive a time-study man. Their small number is doubly significant if the workmen are skilled, for those two circumstances make it uneconomical to have a special salaried employee, competent to perform the work, cooperate with the time-study man in setting piece-rates.

Finally, we note that these workmen were engaged on essentially hand operations. The machine involved was really a tool. It sometimes is true that operatives on this type of work do not know their capacities, and they may increase their output very considerably after their tasks have been standardized and the piece-rate system applied. For this reason, had there been no prior effort to limit output, the increase in these workers' output would not in itself have been conclusive evidence of fraud.

January, 1926

J. W. R.

41. HARNETT GENERATOR COMPANY¹ I H.B.R. 174

COMMENTARY: The question of selecting the most effective incentive for any group of workmen depends, for its ultimate choice, on many facts which cannot be covered in a written description of the situation, and especially on the existing relationship between the workers and their superiors. This latter factor is of such intangible nature, and capable of detection only by so relatively few persons, particularly sensitive to emotional atmosphere and in actual touch with the current life of the shop, that consideration of the case must proceed without this element. At the outset it must be recognized, however, that actually the final choice could be arrived at rightly only by giving this relationship the principal weight in the decision.

¹ Fictitious name used for purpose of disguise.

In the Harnett Generator Company, the effect of installing a bonus system in the tool department would depend largely, first, on the confidence of the men in their superior officers; second, on their confidence in the knowledge, accuracy, and fairness of the engineer who set the rates; and third, on the experiences of the other 70% of the factory force with the piece-rates.

There were, however, specific difficulties in making effective the system described. Unless an engineer is of unusual skill, his standards when established by personal judgment usually cannot be set so uniformly, relative to average working speeds, as if they were arrived at by strict time-study methods.² The method used by the Hartnett Generator Company probably would result in "soft" and "hard" standards. That factor would not necessarily spoil the effectiveness of the incentive, provided that the giving out of work was wisely administered by a foreman who was cognizant of the variations. The method required, however, a better foreman and closer knowledge of the workers than more uniform job standards would have needed.

A 25% allowance for delays in a shop where the flow of work cannot be regulated, as is the case in most tool shops, is much lower than usual, but in this case there presumably were special reasons for this in the way the engineer made up his standards.

Another source of difficulty may have been the inspection method. Depending on workers to stop imperfect pieces, when there is no money penalty attached to rejections, is sometimes successful. When there is a penalty for the man who spoiled the piece, however, workers will not make rejections of their colleagues' output unless there is ill feeling in the shop. Such refusal was more than ordinarily probable in this case, since the penalty for spoiling a piece was twice the bonus for making a piece within the time allowed. It is an invitation for trouble to apply a bonus without the management's taking over full responsibility for detecting spoiled pieces, and arranging for inspections at suitable points in the process by an independent inspection department.

In conclusion it should be repeated, however, that, with pleasant relations in the shop and with harmony and confidence between management and men, such a bonus system, despite its unfavorable aspects, might be installed and made to operate for a while at least with success in speeding the rate of work.

March, 1926

G. J.

² Cf. Merrick, D. V., *Time Studies as a Basis for Rate Setting*, Engineering Magazine Company, New York, 1920.

42. DEERFOOT RUBBER COMPANY¹ I H.B.R. 178

COMMENTARY: The case of the Deerfoot Rubber Company, like that of the MacBride Electric Company,² involves the application of group bonuses. In discussing any written problem on this subject the utmost that can be done is to speculate on the various possible results. In any given instance the result will turn on local conditions—sometimes on circumstances which might seem wholly irrelevant. For instance, the application of a group bonus, in a department known to the writer where certain racial feeling had been stirred up by causes wholly outside the factory, resulted in a marked decrease in the volume of output simply because no man would exert himself for fear he would help to earn a bonus for one of the others. With such variations from average experience occurring from time to time, it is unsafe to predict the results of specific decisions.

In the Deerfoot Rubber Company case, the result of the group bonus was further complicated by the fact that the company was paying "time and a half" for overtime. Thus the group bonus for speed was in direct competition with a financial incentive to work slowly. Doubtless there would be some in the group who would prefer the extra money to the extra time, and it is very likely that animosities and conflicts within the group would be stimulated by this choice which was placed before the men. Undoubtedly those who were willing to give up part of their wage in order to complete the work in eight hours would try to force the others to do likewise. But that very pushing would make all the more bitter the men who felt pressed for the extra compensation. There would seem to be real danger that friction would be caused which might result in intentional carelessness in mixing, or in slowing up the work as a whole. However, it might merely result in forcing a change in the personnel which would result in better cooperation in the end.

December, 1925

G. J.

¹ Fictitious name used for purpose of disguise.

² I H.B.R. 181; commentary, just below.

43. MACBRIDE ELECTRIC COMPANY¹ I H.B.R. 181

COMMENTARY: The group payment plan adopted by the MacBride Electric Company may well be considered together with that used by the Deerfoot Rubber Company and discussed in the commentary on

¹ Fictitious name used for purpose of disguise.

that case.² The plan used by the MacBride Electric Company had two advantages over that of the Deerfoot Rubber Company. First, it was applied to small groups of four men each, with the result that the chance of finding men who would act counter to the intent of the incentive was minimized; such persons, moreover, would affect only certain quantities and not the whole department. Second, there seems to have been no competitive incentive, such as an increased rate of payment for overtime work, offered by the company to stimulate latent opposition in the present case.

The plan was worked out mathematically to provide a real reward for quicker work. Certain contingencies which might cause trouble had been canvassed and provided against. This fact would indicate that other contingencies, especially those likely to arise from the individual personalities involved, had been canvassed likewise and had been provided against.

December, 1925

G. J.

² See Deerfoot Rubber Company, 1 H.B.R. 178; commentary, 2 H.B.R. 438.

44. TONNERRE CURTAIN COMPANY¹ 1 H.B.R. 183

COMMENTARY: There are three major questions involved in the case of the Tonnerre Curtain Company: first, whether a bonus of any kind will secure more efficient work; second, whether this particular bonus scheme, which is the old F. W. Taylor differential piece-work plan in disguise, is good in the situation described; third, over how long a period the bonus should be figured to obtain the best results. The questions will be discussed in reverse order.

The period for bonus computation has been under discussion ever since bonus schemes were introduced. Theory does not give any satisfactory answer, but practice has demonstrated widely, what the experience of the Tonnerre Curtain Company corroborates, that in general the longer the period the less successful the incentive. Under a system of weekly pay days it appears to be worth the expense to compute and report to the workers, daily, the bonus they earned the previous day. Even when computed daily, moreover, the incentive loses its effectiveness unless the daily reports are made to the worker herself. Indeed, many bonus schemes figure the bonus on each job separately and provide daily reports to the operatives.

It is interesting to note from the case, however, that the reason for experimenting with lengthening the bonus period arose from the fact, commonly noted, that with short-period bonuses or with differential

¹ Fictitious name used for purpose of disguise.

piece-rates there was a tendency for the operative to work rapidly the first part of the bonus period until a satisfactory wage had been built up and then to slacken effort during the last part of the period. Penalties to overcome this tendency have caused so much dissatisfaction that few companies use them. There have been numerous experiments with lengthening bonus periods, but they, too, have not been found satisfactory. The trouble has been that the real causes of the difficulty were not understood. It is generally recognized that there are two reasons why the rate of work over the bonus period becomes irregular. If the incentive is calculated too high per unit, it may do one of two things according to the conditions of management: First, it may cause operatives to exert themselves so hard at the start that there is a resulting accumulation of fatigue which subsequently slows the workers down in spite of their desire to maintain their initial pace. Second, it may enable workers, through maximum exertion at the start of the period, to assure themselves of their usual earnings for the period even though they slacken their pace during the remaining time. There exists a feeling such as that described by Whiting Williams² as existing in the coal fields—that the test of a man's ability is the amount of time he can spend apart from work without lowering his standard of living. Many workers, if given so liberal a return that they can earn more than they need to live on the scale of their group, seem to prefer the pleasures of relaxing their pace and thus lessening their fatigue, in place of the possible extra return in the pay envelope. In other words, there are both unconscious and conscious reasons for irregular rates of production and both should be investigated where variations of the type discussed appear in more than normal degree under any wage system.

The system adopted by this company is nothing short of the differential piece-rate of F. W. Taylor in disguise. Such a scheme has fallen into disrepute among workers³ and if introduced without disguise might arouse antagonism because of its reputation, if for no other reason. Part of the opposition to differential piece-rates undoubtedly came originally from the setting of standards, in early applications, that were too high for average workers to attain without overfatigue. That the plan worked in the Tonnerre Curtain Company may be ascribed to the fact that the girls were not organized and per-

² Williams, Whiting, *What's on the Worker's Mind*, Charles Scribner's Sons, New York, 1920, p. 125.

³ Violent opposition to the introduction of differential piece-rates at the Watertown Arsenal resulted in the passage of bills in Congress prohibiting the use of government money to pay differential piece-rates, premiums, or bonuses. The principal objection openly made has been that such systems drive workers to such an extent as to cause overfatigue.

haps did not recognize the plan as a scheme of differential piece-rates. Furthermore, it is probable that the standards in this instance were set lower than under the old Taylor applications. Because of the factors above, it may be questioned, however, whether the plan would continue to operate successfully even though it seemed to give satisfactory results at the outset.

The general question as to whether a bonus is the most effective way to increase the general pace of the shop cannot properly be answered by the data at hand. Like all incentive systems, its success is too much dependent on intangibles and on relationships between workers and management to allow of any decision without intimate personal contact with the shop. It may be said, however, that with satisfactory wage-rates, speeding up to reasonable limits usually can be accomplished by skilful teaching and leadership even without direct financial incentives, and when it is thus attained it is usually more permanent and more regular. Financial incentives are easier to apply than such leadership, and take less managerial thought, but their results are more uncertain. Not infrequently they overshoot the mark by providing the wrong incentive or too strong an incentive for the specific purpose aimed at, especially when the factor of fatigue is not carefully and scientifically considered.

April, 1926

G. J.

45. GRADNOR INSTRUMENTS COMPANY¹ I H.B.R. 185

COMMENTARY: Significant facts found in this case are:

1. A large percentage of employees paid by piece-rates which stressed quantity production and thus introduced the need of a balancing influence toward the maintenance of quality;
2. The presence at certain periods of outside competition for such labor as the company employed;
3. The establishment of a penalty for spoiled work based upon the cost of the material fabricated.

It is an axiom that incentive springs from the hope of reward or the fear of penalty. As the economic security of the worker tends to become strengthened, the trend of industrial practice is towards greater use of the reward. The most salutary situation, therefore, is that in which the desirability of the job (rather than the fear of lower wages or unemployment) produces sufficient incentive to maintain the necessary standards without the use of penalties. Where this is not possible,

¹ Fictitious name used for purpose of disguise.

the use of differential piece-rates determined in connection with the percentage of spoilage, lays emphasis upon variations in reward rather than upon the presence of the penalty.

The Gradnor Instruments Company established a nominal penalty, namely, the cost of material spoiled. The expression of a penalty in terms of the cost of material is open to question, as it is doubtful if such a specific charge may be fairly assigned to the employee. Were the error within employee control, it might have resulted from innate lack of ability. In such case, the employment functionaries would be in part responsible. The same statement holds if the error resulted from a natural tendency towards carelessness. If the error were intentional, departmental discipline would require more rigorous treatment than such a penalty affords. Lastly, so arbitrary a determination of penalty (the cost of materials) provides grounds for employee question as to the justice of this specific charge, which is but one portion of the losses involved.

In summation, the Gradnor Instruments Company would have best dealt with the problem of quality maintenance had it offered to its employees such terms and conditions of labor that the *incentive of continuing employment* would be sufficiently powerful to maintain the desired quality standards. If the situation could not have been thus organically dealt with, then the use of differential piece-rates, as previously described, could have been considered. The use of the penalty should have been considered only as a last resort. Such a penalty, however, should have been expressed in terms of employee wages rather than in terms of company cost. It should have been openly defined as a means of attaining higher quality rather than as a distribution of losses sustained. Its degree of severity should have been that which would effect the most profitable balance between all losses resulting from spoiled work and all losses resulting from increased labor turnover.

January, 1926

E. H. S.

46. GILBERT RUBBER COMPANY¹ I H.B.R. 188

COMMENTARY: Significant facts found in this case are:

1. The presence of executive favoritism in applying the penalty for spoiled work;
2. The opportunity to sell spoiled work without rework and thus to reduce the extent of the loss;

¹ Fictitious name used for purpose of disguise.

3. Inherent technical difficulties in determining the precise causes of spoilage.

It is probable in this case that had the situation not been aggravated by the presence of favoritism and technical difficulties, the undesirable basic aspects of the minor penalty would have been overbalanced by its practical effectiveness in maintaining quality. The removal of these injustices, however, so improved the "total situation" surrounding the job that the desirability of *continuing employment*² provided sufficient incentive to maintain satisfactory quality standards. The risk involved in attempting this procedure was unusually low because of the salability, without rework, of defective product.

It is interesting to note that the ultimate desirability of the job resulted largely from an appreciation of its *improved* status. Had the employees not experienced this improvement and thereby gained confidence in the administrative desire to see fairness shown, the desirability of the job might not have been so clearly evidenced and its incentive toward quality might, therefore, have been so low as to require the use of further rewards or penalties.

January, 1926

E. H. S.

² See commentary on Gradnor Instruments Company, page 441.

47. FOGEL MACHINING COMPANY¹ I H.B.R. 190

COMMENTARY: The Fogel Machining Company's plan to train apprentices first in a segregated workshop and then in its plant was suited to the changing needs of the apprentices as their training progressed.

Intensive training in a segregated workshop during the initial months of the apprentice period was advisable for several reasons. Under those circumstances, instructors could judge the ability of the candidates more accurately; instructors could insist upon and require proper methods of work; instructors could impart counsel and encouragement to learners. The environment was better suited to the giving of explanations. Small groups could be gathered about a machine or workplace to witness an elementary demonstration, whereas in the factory a group demonstration might not be physically possible; it would disturb workmen and give rise to comment. The apprentices were not put into the plant when mere novices; that practice would have subjected them to discouragement and perhaps ridicule.

After this preliminary period, the company transferred its apprentices to factory departments. There they worked under typical conditions with one exception—the supervision afforded them was more

¹ Fictitious name used for purpose of disguise.

intensive than that given experienced workers. The classroom work which was continued brought apprentices into contact with the instruction staff daily, and thus continued to afford opportunity for personal counsel. The instructors' conferences with foremen resulted in joint ratings of apprentices. Those conferences also directed the foremen's attention to the training program frequently.

In this secondary period, apprentices worked under foremen who were specialists upon the particular tasks which engaged the apprentices. Foremen had the opportunity to judge the abilities of the learners and the preliminary work given by the training department. The foremen were in a position to make suggestions for the improvement of that work.

The plan was economical from the standpoint of equipment expense. Only fundamental types of machines were necessary in the apprentice workshops; the special machines remained in the producing departments. The apprentices worked upon both varieties in the course of

METHOD OF ROUTING LEARNERS UPON VARIOUS OPERATIONS

OPERATION	WEEK OF								
	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29	Feb. 5	Feb. 12	Feb. 19	Feb. 26
I (1 week) 1 machine necessary*	A	B	C	D					
II (3 weeks) 3 machines necessary*		A	B	C	D				
			A	B	C	D			
				A	B	C	D		
					A	B	C	D	
III (2 weeks) 2 machines necessary*						A	B	C	D
							A	B	C

Letters in squares refer to individuals.

The scheme requires that a group of uniform size be taken in at regular intervals.

Strict coordination of equipment is necessary.

The unit of time must correspond with the period necessary to teach the simplest operation in the series.

*The letters may refer also to squads of uniform size, in which case the number of machines necessary upon each operation would include the number stated above, multiplied by the number of men in a squad.

their training. The use of material intended to be fabricated for customers increased the responsibility of apprentices and improved their morale; besides, it yielded a product having value.

The case mentions the possibility of routing apprentices from one workplace to another, according to a systematic plan. The chart shown on the opposite page is suggestive of such a routing schedule.

A chart similar to the one shown was used in a large plant in the training of expert repairmen upon complicated machines.

November, 1925

J. W. R.

48. CHILLICOTHE PAPER BOX COMPANY¹ I H.B.R. 192

COMMENTARY: We note that the average earnings of female box-makers in this company were \$20 per week, several dollars more than the minimum wage ruling.

The company's problem, therefore, related not to the rates in effect, but to the individuals who for one reason or another did not process enough work to yield them, at those rates, weekly earnings above the minimum laid down by the authorities.

The company found that the failure of 40 girls to earn the minimum wage was due either to insufficient training, lack of capacity, or unwillingness to put forth effort. These reasons were ascertained at first hand by dealing with individual cases. After it had found causes, the company readily determined upon suitable remedies.

The case is suggestive to any company whose rates are proper, judging from average earnings, but some of whose employees earn far below the standard. Interest in the positive measures taken by this company is not confined to employers in states having minimum wage laws in effect.

It is worth noting, however, that the minimum wage ruling in this case was beneficial to the company. It was the immediate reason for the company to improve the capacity and diligence of certain of its employees.

November, 1925

J. W. R.

¹ Fictitious name used for purpose of disguise.

49. ANGELL ELECTRICAL COMPANY¹ I H.B.R. 194

COMMENTARY: The issue presented in this case is whether a company should pay nominal sums for useless suggestions from employees

¹ Fictitious name used for purpose of disguise.

in order to encourage employees to make further suggestions, some of which might prove valuable.

The affirmative position adopted by the Angell Electrical Company probably had the desired effect immediately; its favorable result in the long run is questionable.

After a time, the employees would notice that the company had paid for suggestions which it did not intend to use. Consequently, they would charge the company with bad faith. Authors of suggestions especially would resent the deception, as most of them would be looking forward to seeing their ideas put to use. Once public, the policy would discourage the submission of suggestions, as few men wish an insincere reward.

From the company's standpoint, the chief value of a minor suggestion is that it calls attention to an individual in the organization who has constructive ideas. A nominal award which disregards the usefulness of minor suggestions is not a wise method of stimulating constructive thought in proper ways. Indeed, such awards given indiscriminately stimulate tinkering.

The author of a useless suggestion which, however, evidences serious endeavor, is rewarded best by pertinent criticism of his idea and by encouragement to make another attempt. The ultimate effect of this policy should be to call forth fewer but sounder suggestions from the rank and file. Criticism and encouragement can be given best in personal interviews. An interview of this kind affords the company an opportunity to explain the financial side of putting ideas into practice and, thus, educates the more thoughtful and constructive minded workmen in the managerial view-point. The interview shows that the company regards the maker of a suggestion which evidences thoughtful effort as a person worthy of recognition and encouragement.

January, 1926

J. W. R.

50. LESTRADE TOOL COMPANY¹ I H.B.R. 196

COMMENTARY: The basic question in this case was whether the existing housing shortage was temporary or likely to continue for a number of years. Apparently the company's executives believed the shortage a relatively permanent one, to be remedied by the erection of additional houses in the locality.

A large part of the case is concerned with various housing schemes open to the company at that time. The plan finally adopted by the company had certain merits. Employees who took advantage of it

¹ Fictitious name used for purpose of disguise.

acted upon their own initiative, paternalism was absent, the fund was to earn a fair return, and the company did not complicate its relations with employees by being the landlord of many of them. The plan favored the company's skilled workers, who were the ones likely to have the necessary deposit to entitle them to further credit. The plan promoted home ownership; it did not increase the number of lessees. Home ownership by employees was advantageous to the company in that it furnished a strong incentive to earning and saving.

The questionable features of the scheme relate largely to the employee's ability to take the initiative in building a home. These questions arise: Did the employee understand the financial aspect of home ownership? Did he know enough about building operations, materials, and plans to deal with contractors? It is not stated whether employees were to be given any assistance in these matters.²

Under this plan the employee built independently and paid retail prices for his material, whereas the employer could have built upon a larger scale and obtained better terms.³ Offsetting this advantage of lower material costs through large-scale building by the employer, there were probable serious disadvantages for the company. The employees might blame the company in case the houses later showed defects; the employees might allege that the company was obtaining a profit on the materials purchased. Moreover, the plan would have a paternalistic tinge.

Unless the Lestrade Tool Company beforehand had prepared plans of dwellings and then sold land according to the planned restrictions, the development would have been haphazard and without standards.

Under this loan plan there would be no complaints that the company discriminated between employees in allotting or maintaining dwellings, nor that occupants of company houses really obtained a better return than employees who paid the higher rents charged by private landlords. Still there remained the possibility that employees would allege discrimination in allotting credit. The provision for joint administration of the loan funds, although apparently a democratic scheme, had the disadvantage that a number of employees would object to any fellow worker passing upon their applications for credit.

The plan did not provide for immediate housing relief, but for relief at the end of one or two years. It could apply only to workers

² One company asked an official who had had experience in building houses to act as advisor to employees who wished to build at this time. He was assisted by a committee of three employees, each of whom was a homeowner.

³ A case in point is furnished by the Endicott Johnson Corporation, which erected a large number of cottages for approximately \$3,000 each, including garage, and whose officials estimated that those cottages if built individually would have cost from \$4,000 to \$6,000. *Endicott Johnson Workers' Magazine*, December, 1923, p. 5.

earning sufficient wages to afford a monthly carrying charge of between \$30 and \$50.⁴

From the workman's standpoint—particularly the workman who lives in a small town—the purchase of a house is a questionable step. Home ownership reduces his mobility. This point would not arise, however, in case the company made an agreement to repurchase his dwelling at its cost less a reasonable depreciation.

At the time of this case, building prices were recognized to be abnormally high, and employees who took advantage of the plan shouldered a risk of substantial shrinkage in the values of their houses. The seriousness of that risk was indicated by the small amount of speculative building then under way. Whether the company planned to reduce the risk of loss to employees is not stated. The prohibition of excessive loss to employees under this plan might have been accomplished and at the same time the company could have prevented speculative reselling. In consideration of the company's agreement to purchase back a house at the employee's request under certain agreed terms, the company might have had the option to purchase that house upon the same terms before it was sold to other parties. But the Lestrade Tool Company thus would have assumed a large contingent liability to invest in employees' houses during a period of curtailed operations and business depression.

The chief disadvantage of the company's plan to advance credit to employees who desired to build homes was that it did not promise to relieve the housing situation immediately. As an emergency housing measure the company could have canvassed the housing facilities of the locality along each of the main roads leading to the town. A company agent should have searched for large country houses, portions of which might have been leased to families evicted by the Wilkes Motor Company. Individual workers living at outlying points and owning automobiles could have been induced to operate automobile services. A subsidy could have been paid to the operators to justify regulation of them by the company. The company might have constructed a barracks and eating quarters for a number of male employees, and stored their household effects while their families took up temporary residence with relatives in the town or elsewhere.

Furthermore, the time was ripe for the company to have changed its rental policy and to have imposed charges for its houses that would have reimbursed it for maintenance, depreciation, and interest on the investment. The rental increases should not have been made without a personal interview with each tenant, in which their justification was

⁴ Carrying charges on workmen's homes have been estimated to be 10.6% on the investment. See *Home Building for Wage Earners*, Fred T. Ley & Company, p. 13.

explained. The results of the changed policy would have been some "doubling up" and also a greater inducement to private capital in the community to engage in building ventures.

January, 1926

J. W. R.

51. CALDWELL TELEPHONE COMPANY¹ I H.B.R. 199

COMMENTARY: The Caldwell Telephone Company was in far better position to establish a relief fund for its employees than were many other companies. In the first place, it was engaged in a firmly established business and it could hold forth in good faith the prospect of benefits to its employees in case they met with adversity. Moreover, a large number of people were affected by the plan, so that its probable costs could be predicted, with a large degree of assurance, from vital statistics and from early experience under it. Telephone service offers a relatively steady opportunity for employment; hence eligibility to benefits held forth in this relief plan on the basis of length of service was attainable by a majority of the employees. Finally, the costs of these benefits were regarded as operating expenses by public regulatory bodies which also fixed the rates charged by telephone companies with a view to yielding those enterprises a reasonable return upon investment. In the case of this company, as a result, there was more reason from an administrative standpoint to establish these funds than in the case of a highly competitive business subject to greater risks.

As regards the specific schedules of benefits stated in the case, one may note the usual relation between the amount of the pension awarded, the wages received by the applicant for a pension, and his length of service. A significant provision is that retirement may take place but is not compulsory at the stated superannuation age. That provision permits a person of advanced years, but yet of adequate physical powers, to continue in service.

It is evident that the company felt a larger obligation toward employees who suffered accidents in the course of duty than in the case of employees who became ill. There was no waiting period before benefits became payable to persons sustaining accidents. The waiting period in the case of employees claiming sick benefits was imposed, no doubt, to discourage malingering. Likewise, a larger obligation was felt by the company toward a man killed in the course of duty than toward one who died as the result of sickness.

From a review of the facts set forth in the case, the company's decision to establish a non-contributory plan rather than some type of con-

¹ Fictitious name used for purpose of disguise.

tributory plan seems to have been justified. Although a non-contributory plan, controlled entirely by appointed members of the official staff, is open to charges of arbitrariness and paternalism, a contributory plan imposes a larger obligation upon the company and is a foundation for more definite expectations on the part of the employees. A conclusive reason for not establishing a contributory plan in this case was that the company had not carefully established on actuarial principles the probable future claims that would be made upon the benefit fund. The case does not state whether the plan in so many words informed the employees that it was subject to revision or withdrawal by the management, and thus warned them specifically against regarding the benefit plan as a fixed obligation of the company. In the second place, the fund was not built up on the reserve basis as are the funds of supervised insurance companies. Some contingency might have compelled the Caldwell Telephone Company to suspend or modify the benefits stated in this plan. The plan was a statement of purpose subject to revision, not a contract conferring enforceable rights on employees.

This non-contributory plan applied to all employees having stipulated lengths of service. The number eligible, 140,000, established a broad base upon which probable obligations could be calculated. Since all employees were included, both good and bad risks were combined, and the per capita cost of the plan was reduced. Under a contributory scheme, on the other hand, the poorer risks, although desiring to join because of their realization of probable future adversity, would be deterred from doing so because of the necessarily large payments that would have to be made by them. A company does not wish to refuse aid to distressed employees, not members of a voluntary contributory benefit plan, yet in aiding them it is unjust to contributors to the relief plan. Such allowances swell its expenditures for relief and, because of their irregular nature, open the company to charges of discrimination.

The fund set aside by the company in this case apparently was not an investment of money in securities of outside firms, but was a book reserve, not available for distribution to stockholders. Although in this particular case it is likely that the assets or borrowing powers of the company were such that proper claims on the "fund" to its full extent would be honored, it is plain that such an earmarked surplus is not an asset but a claim to general assets, and, therefore, it is not so liquid as well-selected securities that are readily marketable.

The worth of a relief fund cannot be strictly determined. It is concerned with intangibles such as the reduction of worry and the mitigation of suffering. On the other hand, the costs of a plan can be known and its probable obligations established with increased certainty as

time passes. It is not surprising to note the company's failure to observe any effect of the plan upon labor turnover or upon the attracting of applicants for employment. These matters are influenced by many changing factors.

The figures stated at the close of the case should be supplemented, for comparative purposes, by more detailed data. Desirable figures would be classified according to type of employee and according to expenditure for the several benefits. The cost of the respective benefits should be related not to the total pay-roll, but to the pay-roll of particular groups, so that comparisons could be made with specific features of benefit plans in other industries. As there are many young women in a telephone company's organization, the percentage that its benefit payments bear to total pay-roll should be lower than analogous figures applying to employee groups having higher average ages and longer average periods of service.

January, 1926

J. W. R.

52. THRASHER COTTON MILLS COMPANY¹ I H.B.R. 203

COMMENTARY—A: The stock of an industry subject to considerable risk from fluctuating business conditions is not suitable for sale to its employees, unless the offering is made at a price which approximates the minimum figure to which it is likely the market price of the stock will decline in a period of declining security prices. In this case an offering was made of the common stock of an industry which is subject to large risks at a price approximately that in the open market, at a time when stock prices were high and money rates advancing. Under these circumstances, the probability of creating ill will and distrust in the working staff so outweighed the possible advantages that the sale of stock to employees was ill-advised.

December, 1925

H. B. V.

COMMENTARY—B: A plan to distribute the securities of a company among its working force has a bearing both upon labor relations and company finances. The material presented in this case is inadequate for a discussion of the bearing of this plan upon the company's finances.

From the standpoint of labor relations, the company in this case saw certain advantages in stock sales to its employees. It thought stock ownership would increase employee interest in company opera-

¹ Fictitious name used for purpose of disguise.

tions, would reduce labor turnover, and, to a certain extent, would aid in harmonizing the views of employees and owners.

An investment plan for employees should offer them a security which has maximum safety as regards principal, which pays an attractive rate of income, which is traded in upon some exchange, and which is widely held. The investment plan should provide for the collection of instalments by a regular and economical process, and should afford employees an inducement to continue as investors. The plan also may be supplemented by budgetary material which will aid employees in arranging their personal finances.

The Thrasher Cotton Mills' common stock was a questionable investment for employees. The fluctuation stated in the case, although not an excessive one for a common stock of a textile company in a general market movement, must have caused much discussion and misgiving among employees who had purchased shares under the plan. Earnings in the textile business vary greatly from year to year, and many textile companies follow an uneven dividend policy. One year dividends are passed and the next a high rate is paid by some of these companies. Consequently, their stocks fluctuate sharply in value.

The theory advanced by the company that employees should sustain risks to acquaint them with the problems of the investor is not sound. According to it, the employee—a small investor who needs security—should take risks to gain an "education" and an experience in the problems of the large investor. The employee needs an investment that offers above all security of principal and a steady return, qualities that will make his investment dependable in a time of adversity.

Pay-roll deductions are a regular and economical means for collecting employees' funds for investment. In this connection, the case did not state whether the employees could buy securities outright for cash at the reduced rates. That practice has resulted in employees' speculating in securities or in their buying securities for others and dividing the profits from resale with their financial backers. To prevent those abuses, several companies have provided that securities bought under their investment plans can be paid for only by pay-roll deductions and at no greater rate per week than is specified in the original pay-roll deduction order signed by the employee.

Only under exceptional circumstances should pay-roll deductions be made for more than one item. If a company already is deducting house rentals or some other charge from the pay envelope, it should be slow to begin an additional deduction. These deductions tend to reduce the employee's satisfaction in his wages and, therefore, reduce the incentive value of the wages. If a security distributed to employees is widely held by investors and is listed upon some exchange, the em-

ployees can satisfy themselves regarding its value at any time; and they can dispose of the security at will.

Apparently no inducement was to be offered to employees to continue to hold the stock. In support of such an inducement it may be said that a thrifty employee has sound uses for his earnings and hence is likely to be a steady and diligent worker. In the second place, an inducement offered to the employee for holding an investment can increase its return to a figure that will offset the appeals of stocks of questionable character. Largely for this reason, some companies offer employee investors \$4 or \$5 per year per \$100 par value of securities held.

Some of the advantages seen by the Thrasher Cotton Mills in its investment plan are open to question. The chief objection to the plan was that it concentrated the employees' resources to an undesirable degree. The investments and the wages of the employees were subject to the same risks. Hardship resulting from unemployment and a loss of earning capacity under such circumstances would be intensified by shrinkage in the value of savings.

Any employer undertakes a serious obligation in sponsoring investments for his employees. Should those investments prove unwise, employees have common cause against him. The income from employees' securities usually is so small, contrasted with their wage income, that security ownership would not cause them to forego a wage increase that they believed rightfully due them. Since instalments must be made withdrawable by employees, the effect of such plans upon labor turnover is doubtful. The plans have slight appeal to the employee who likes to drift about.

The return obtained by employees from investments in the common stock of companies employing them may be affected only remotely by the employees' diligence. Profits often depend on fluctuations in the markets for raw materials and finished goods. These considerations seem pertinent to the cotton manufacturing business. More fitting to induce a large percentage of employees to take an active interest in production problems, would be some form of management sharing in which effort and reward would have more direct relation.

Despite these limitations of stock sales to employees, the employer does not wish to stand aside while those of his employees with funds to invest are misled by sellers of questionable securities. The effect of unwise investments upon their peace of mind is of direct interest to him. Some employers also have desired to put before their employees an additional incentive to maintain or increase earning capacity.

These aims are not properly served, however, by offering employees

stock that has risk of large fluctuations in value, as was done by the Thrasher Cotton Mills early in 1923.

December, 1925

J. W. R.

53. TAREYTON MILLING COMPANY¹ I H.B.R. 207

COMMENTARY: In establishing this precedent, the company had to consider a number of intangible factors incapable of close estimate. Unquestionably, an employee transferred because of merit is a better risk than an outsider. His capacity and diligence are known; he is familiar with the plant methods and layout; presumably he is satisfied in the company's employ and is less likely to leave than the newcomer. Each transfer to better-paid work, arranged because of the employee's merit, stimulates the employee involved; it also becomes an incentive to other employees, who thereby are shown that ways to increase their earning power are made open from time to time in the organization.

The compensation paid to a transferred employee in some organizations depends upon whether the transfer was made upon the employee's initiative or upon the company's initiative. The employee transferred on the company's initiative receives his customary earnings until he earns more upon the new job. The employee transferred upon his initiative receives the wage-rate applying to the task to which he is assigned.

The statement of this case creates the impression that Downs had not asked for the transfer prior to the time that the employment manager tried to arrange it for him. Whether Downs finally requested the transfer and so was technically responsible for it is not stated. The company's agent exercised sufficient initiative in this case to place it apart from the usual transfer made at the employee's request.

Another factor of importance in this connection is the basis of wage calculation that is used in the department to which the employee is assigned. It is possible to defer upward wage adjustments of employees who are paid by the week and, thus, if the employee does not leave, for the company to recoup itself for any overpayment made to the employee during the period immediately following his transfer. Where piece-rates apply, a company in maintaining a transferred employee's earnings at their former level probably would have to pay a special amount to the employee in addition to his piece-rate earnings.

It seems that in this case Downs should have been willing to sustain some immediate loss in view of the company's ability to hire men for the "machine job" at an initial weekly rate of \$20. The plan devised

¹ Fictitious name used for purpose of disguise.

by the company would serve as a selective device; it would not discourage the farsighted employee, who would be willing to take an immediate loss in the interest of future advancement.

The objection of department heads to paying higher wages to transferred employees than to new employees might be met by setting up an overhead expense account to which would be charged transfer allowances authorized by the works manager. These sums then would be segregated and would not be regarded as cost items within the control of department managers. Such a system would be applicable where piece-rates were in effect. In each instance, the allowance would decrease from week to week in inverse ratio to the expected increase in the transferred employee's earnings. The plan, if applied where the time basis of payment was in effect, would be open to one abuse. Some foremen might defer raising transferred employees' personal rates so long as those rates could be subsidized through the overhead expense account.

June, 1926

J. W. R.

54. PORTER MANUFACTURING COMPANY¹ I H.B.R. 210

COMMENTARY: The installation of an employment department in the Porter Manufacturing Company established a channel of communication, apart from the foremen, between the employees and the officials. The employment manager received complaints that foremen were discriminating in favor of relatives and friends in their departments. The case illustrates one service that can be rendered by such an independent channel of communication.

The loss involved in personal discrimination is not primarily the smaller amount of work done by the favorites, but the injury worked to the morale of the organization. The presence of a foreman's relatives and friends in his department subjects him to influences aside from those upon which the merits of employees should be judged.

The statement of the case indicates that the employment manager of the Porter Manufacturing Company corrected this situation. The reviewer believes that had he brought the condition to the attention of the chief production official, that official would have accomplished without difficulty the removal from any department of its foreman's relatives and friends. At the time, the foremen probably were jealous and suspicious of the employment manager, and his act in this matter no doubt intensified their feelings.

The superintendent could have pointed out that the presence of rela-

¹ Fictitious name used for purpose of disguise.

tives in the department interfered with supervisory effectiveness and, hence, that it was to the direct interest of a foreman to have no relatives or friends under his direction. Their presence was ground for suspicion; it was a vulnerable condition upon which subordinates could vent other dissatisfaction.

So that a foreman's prestige may not suffer by his inability any longer to obtain work for friends, an employment manager should endeavor to hire any person recommended by a foreman, but not to place him under that foreman. It is probable that a person so placed would endeavor to justify his recommendation and that the foreman who recommended him would watch his progress with interest.

November, 1925

J. W. R.

55. FAIRPORT INTERURBAN COMPANY¹ I H.B.R. 212

COMMENTARY: Two features of this case merit attention. Had the president granted the office employees' request in its original form, and given no thought to its effect on their wages per hour worked, he probably would have received requests from employees in other departments for concessions comparable with the favor accorded the office employees. The president's solution avoided such an outcome.

The other significant point of the case was the company's mode of establishing the specific working hours of the office employees in collaboration with their committee. The changed hours involved readjustment and some discomfort. Had the company assumed full responsibility for the change, it would have been criticized in private by employees who thereby were inconvenienced, and perhaps few employees would have stated their unfavorable opinion to the manager. By allowing the employees' committee to assume partial responsibility for the revised schedule, the company, through the committee members, heard of dissatisfaction as well as satisfaction with that schedule, which apparently was adjusted finally to cause the least difficulty to commuting employees.

October, 1925

J. W. R.

¹ Fictitious name used for purpose of disguise.

56. MASON STREET RAILWAY COMPANY¹ I H.B.R. 214

COMMENTARY: Because operators of street-cars deal with the public, a task requiring certain qualities difficult to judge in advance, and

¹ Fictitious name used for purpose of disguise.

because those operators undertake serious responsibilities, a street railway company wishes a low rate of turnover among them. That was the reason stated by the manager for applying a novice's rate to the rehired employee in this case.

The wording of the text permits the inference that, previously, men rehired were treated as "new employees" in the matter of wages. The union grievance committee wished to change that practice.

Two circumstances often tend to keep down the rate of turnover among motormen and conductors. In many localities but one company employs men for these tasks, and when a motorman or conductor turns to other employment his acquired skill in operating a street-car no longer has value. Second, the seniority rule deters men from trying other types of work. The significance of that rule is that men, in the order of their length of service, choose the "runs" that they will operate. The employees having the longest service choose the "continuous" runs scheduled for daylight hours. The juniors have to take short runs scheduled for the morning and evening rush hours and runs scheduled during the evening or early morning. Often a junior has to work upon two short runs which become a divided "trick" involving a large ratio of waiting or idle time to working time. These matters normally retard turnover among street-car operating employees.

The question arises whether extraordinary circumstances had not come into being which led the union to press Pelley's case. One possible interpretation is that the wage-rates established in the then current union agreement were lower at the time of the Pelley case than wages being paid for comparable ability and effort in other industries in the locality. The rates mentioned in the case indicate that it occurred prior to, or during, the World War. Perhaps money wages in general were moving upward at the time, whereas the wages of these street railway employees were settled for a given period by a union agreement. Under such a situation, a marked increase in the turnover rate might be expected, at least until the rates for car-operating employees had been brought up to the market level. The union's request, if granted, would have made it less costly for a car-operating employee to leave the company's service for a temporary period. The manager's ruling maintained one of the chief deterrents that had restrained men from leaving the street railway service to accept positions elsewhere. The case is inadequate in that the date is not stated.

The manager could take the position stated in the case without fear of serious resentment by the union. The decision confirmed past practice. Moreover, the union treated employees who broke their continuous service records as new men in the matter of seniority privileges.

57. BUCKEYE TRACTION COMPANY¹ I H.B.R. 217

COMMENTARY: The general manager, in reemploying motorman Scarry, exercised leniency. Some readers may be surprised at the way in which the union committee subsequently insisted upon a technicality and a concession which appears unjustified.

In all probability the union committee's action was not based upon a belief that Scarry was morally entitled to wages for time lost on account of his discharge, but was actuated rather by a desire on the part of its members to retain their prestige.

After an organized method of dealing with employee representatives has been recognized by an employer, the employer is obligated to utilize that method and maintain the dignity of the employee representatives, whether they be union officials or employees serving upon a shop council. The manager in this case made an adjustment upon an individual's personal appeal, which adjustment the union committee previously had been unable to secure. Apparently, the committee was extremely jealous of its position and resented the concession that was made to Scarry upon his personal solicitation.

The case indicates the necessity of paying attention to technicalities in relations and agreements with labor unions. It serves also to point out the jealousy with which union officials watch their prestige with employers and with the rank and file of union members.

December, 1925

J. W. R.

¹ Fictitious name used for purpose of disguise.

58. NATIONAL ASSOCIATION OF WINDOW GLASS MANUFACTURERS
ET AL. VERSUS UNITED STATES¹ I H.B.R. 219

COMMENTARY: In dealing with business situations the law has a tendency to substitute a study of external marks of "unfair competition" or of "restraint of trade" or other proscribed activity, for a search for the thing itself. Within limits this tendency is perhaps inevitable. In the present case, however, there were all the ordinary earmarks of a contract in restraint of trade—an agreement among competing manufacturers to limit their product by limiting their hours of labor. A glance at the substance of the transaction shows that it had nothing to do with the creation of a monopoly. It concerned a dying branch of an industry and furnished a way out of a difficulty for the handful of

¹ Supreme Court of the United States. Argued November 22-23, 1923. Decided December 10, 1923. 44 Sup. Ct. 148.

workmen trained in that part of the industry. The Supreme Court ignored the legalistic frame of the case and saw the actual business realities behind the misleading indicia.

May, 1926

N. I.

59. VAN ROON MILLS¹ I H.B.R. 221

COMMENTARY: Gingham is seasonal style merchandise and if the variety of patterns offered by the Van Roon Mills each season had been increased, the chances for hitting upon popular styles would have been proportionately greater. If keen judgment were exercised, however, in sensing style tendencies, 84 patterns would serve as well as a much larger number for securing orders on which to maintain production in the mill at full capacity.

Since styles varied in popularity, it was not to be expected that equal volumes of sales could be secured for all the patterns offered. The sales of popular patterns probably would be neither greater nor less, were the number of patterns to be increased above 84. If more patterns were offered each season, more would have to be dropped on September 1 as poor sellers.

The effect of increasing the number of patterns, therefore, provided good judgment were exercised in designing, would have been to cause a reduction in the mill's profits. The losses on patterns discarded could hardly have been offset by charging higher prices for the popular patterns. If the mill had not been meeting with success in designing popular patterns, it probably would have been more economical for it to increase its expenditures for studying style tendencies than to incur losses by trying to offer a greater variety of patterns on the chance that thereby a few which were popular might be hit upon.

In general, it is more advantageous to provide for careful study of style tendencies in designing seasonal style merchandise than to increase the number of patterns in the hope that by the hit-or-miss method success will be attained in offering patterns that appeal to popular taste. The volume of sales is dependent primarily upon the skill of the designing department rather than upon the number of patterns displayed.

November, 1925

M. T. C.

¹ Fictitious name used for purpose of disguise.

60. WEABER MANUFACTURING COMPANY¹ I H.B.R. 226

COMMENTARY: The company decided upon a policy of simplification; that is, it restricted the variety of styles and designs which it manufactured to a smaller number than it previously had made and also apparently to a smaller number than most of its competitors were producing. Simplification is a relative term, meaning merely a reduction in the variety of styles, sizes, and designs manufactured or sold. The economies that result from simplifying a line are so well known as hardly to need repeating. The fundamental question, as regards simplification, then amounts to this: At what point will the gain by reducing costs be offset by the emergence of merchandising obstacles? The stronger the influence which emotional buying motives² have upon demand, the sooner that point of balance is reached in the process of simplification. Among the emotional buying motives, furthermore, some are less consistent than others with a policy of simplification. Thus the success of a simplification program is likely to depend upon the merchandising plans that are utilized to aid in carrying out the program.

Full information regarding the merchandising plans of the Weaver Manufacturing Company is not given in this case. If the company were to seek to stimulate sales of silverware for gift purposes, the restriction on the number of patterns would be less advantageous than if the merchandising program were focused on consumers who were buying silverware for their own use, with particular emphasis on artistic taste. A few well-chosen patterns would gratify artistic taste nearly as well as a great variety of novelty designs or of designs which differed but slightly from each other. If the sales message were addressed primarily to consumers who were expected to buy for their own use, moreover, the economy in purchase motive could be stressed more safely than if the gift motive were dominant; it is dangerous to advise the purchase of gifts because they are cheap.

The responsibility on the manufacturer in this case for continuing production of a pattern over a period sufficiently long to permit the acquisition of full sets strengthened the decision for simplification, particularly if consumers were to be induced to buy silverware for their own homes.

October, 1925

M. T. C.

¹ Fictitious name used for purpose of disguise.

² See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 162-163.

61. SEDONA TOY COMPANY¹ I H.B.R. 228

COMMENTARY: The decisions of the Sedona Toy Company to limit the number of toys to be manufactured and offered for sale were correct under the conditions outlined in the case. If it was customary for retailers to apportion their purchases irrespective of the number of items, then obviously the smaller the number of items, the greater the savings in manufacture and the greater the savings in marketing, provided the number of models offered for sale was not decreased to such an extent as to narrow the range of choice which the buying habits and needs of retailers and consumers required.

Whether or not the $33\frac{1}{3}\%$ reduction for 1924 was advisable depended largely upon the effect of such reduction upon the consuming public. If with the reduction the consumers' demands for variety of toys of the kind manufactured by the Sedona Toy Company were met, and if retailers did not change their policy of apportioning purchases, then the reduction undoubtedly would prove wise. If a study of the sales records of the Sedona Toy Company revealed that for the most part sales were concentrated upon no more than 50 kinds of toys, the chances were large that the advantages of reduction would not be offset by a decrease in sales due to lack of choice. If, on the other hand, the sales were distributed evenly over the 75 items, the shift in buying required to make the new policy successful was greater, and consequently the chances of success were somewhat less. It is true that if the reduction in prices decreased prices and increased sales to consumers and increased the profits of retailers, retailers would be willing to continue their purchases in increased volume consistent with consumer demand. But there was no basis for assurance that retailers would continue their apportionment of purchases; therefore, reduction should have been based upon a study of consumers' demands for variety. It is conceivable that to rely upon continuance of apportionment policies might lead the Sedona Toy Company to reduce varieties to an unprofitable point.

May, 1926

H. R. T.

¹ Fictitious name used for purpose of disguise.

62. COOK COLLAR COMPANY¹ I H.B.R. 231

COMMENTARY: The manufacturing advantages which were to be secured from the proposed policy of the Cook Collar Company need not be outlined here. The correctness of the decision to reduce the

¹ Fictitious name used for purpose of disguise.

number of styles of collars to four, hinges upon the answer to the question as to whether the volume of sales would be maintained and increased after the change. The maintenance or increase of sales volume depended upon two factors: first, whether the new policy was in substantial accord with the desires of the public; second, whether it was in accord with the desires of retailers.

As to the first, the sales records of the company indicated that the wants of a large proportion of purchasers were satisfied by the styles which were to be continued. Furthermore, advertising of the continued styles might help to reduce the number of those who still insisted upon other more extreme styles. From the view-point of the retailer, the distinct benefits to be obtained from carrying smaller stocks which were not rendered obsolete so quickly by changes of style, were sufficient to insure retailer endorsement of the plan, provided consumer demand could be continued or increased. It must be pointed out, nevertheless, that the plan was not one which permitted the Cook Collar Company to be relieved from the necessities of changing styles, because styles chosen must conform at any time to the general style preferences of the bulk of purchasers. It is true that such changes are not made rapidly. The Cook Collar Company could not afford to assume that the choice of four styles which might be correct at the time would be the correct style choice two or three or five years later. For the manufacturer, the reduction in number of styles obviously would be advantageous in selling as well as in production. It would be easier to influence retailers to stock Cook collars, because the amount of investment required would be less than for a large number of styles. The advantages in filling orders, in billing, and in shipping would be substantial, as would be the savings in time and efforts of salesmen.

It seems, therefore, that the company, in risking the possible disfavor of those consumers who insisted upon frequent style changes in collars, acted logically in accord with available facts as to the collar market.

May, 1926

H. R. T.

63. PENDLETON SAW COMPANY¹ I H.B.R. 235

COMMENTARY: In this case, the advisability of reducing the number of styles manufactured cannot be seriously questioned. The reduction of the number of sizes of saws from 513 to 177 was to the advantage of the manufacturer, the dealer, and the public.²

¹ Fictitious name used for purpose of disguise.

² See *Simplified Practice: What It Is and What It Offers*, published by the U. S. Department of Commerce.

The starting point for discussing the advisability of adopting the simplification policy should be the needs and the wants of purchasers as disclosed by sales records. Study of the company's past sales showed that the desire for a majority of the styles manufactured was very small in proportion to the total business. Discontinuance of styles for which there is small sale is the obvious measure from the view-point of the manufacturer, but it is to his interest only if such reduction does not leave real wants unprovided for. It is sometimes necessary to continue to manufacture and sell an article in which the amount of business is small: first, because though for that article there may be only a limited number of uses, those uses may be real and not to be satisfied by other types of product. Second, it is sometimes necessary to continue slow-moving items in order to complete the line, that is, to handle them for the convenience of the buyer and to obtain his good-will in order to procure a competitive advantage. Simplification does not contemplate discontinuing lines merely because the sales are relatively small, if the need for such products is real and sufficient to support production. But the manufacture of slow-moving items to secure competitive advantage by favoring the whims of the buyer is directly affected by simplification.

However, the competitive advantage to be secured by the multiplication of styles disappears as an argument for diversification when competitors agree to eliminate specific styles. In some situations it may be difficult, though by no means impossible, to create good-will without meeting the demands of a trade in which competitors are accustomed to accede to demands for special sizes, finishes, or models. But with the competitors' agreement on standard sizes, the Pendleton Saw Company had no adequate reason for continuing to manufacture sizes other than those recommended by the committee of manufacturers, provided the sizes which were retained amply cared for the requirements of consumers.

May, 1926

H. R. T.

64. KENDALL SHOE CORPORATION¹ I H.B.R. 238

COMMENTARY: It should not be supposed from this case that it lies wholly within the power of the manufacturer to determine whether his product shall be staple in character or shall have pronounced style features. Style phenomena rest fundamentally on consumers' buying

¹ Fictitious name used for purpose of disguise.

motives.² In certain types of merchandise, consumers demand distinctive variations and will not be satisfied with a standardized product. Also, style changes in certain types of merchandise may induce style changes in other types. For instance, fashion changes in the length of skirts apparently have been an important factor in introducing the element of style change into women's shoes and women's hosiery. Under conditions of modern life, the wide-spread diffusion of style information apparently has accelerated the rate of style change for some types of merchandise. Possibly this tendency is an indication that advancing standards of living imply greater diversity of fashions.

On the other hand, there are many types of consumers' goods for which there is little or no demand for variation in styles and fashions. This is true of the great mass of convenience goods, and it is in some degree true of many goods which are purchased by men, since men are not so largely actuated as are women by the typical buying motives on which style phenomena rest, namely, desire for *distinctiveness* and *emulation*.

It is not true, therefore, that the ultimate decision as to whether or not a commodity shall be subject to frequent style changes rests with the manufacturer, nor is it a tenable theory that style phenomena are merely incidental to the depression phase of the so-called "business cycle."

In view of these general considerations, it appears that the manufacturer in this case was adopting a dangerous expedient unless there were reliable indications of a genuine demand on the part of consumers for style changes in men's shoes.

On the part of retail customers of the shoe manufacturer in this case, there presumably was some desire to obtain new merchandise to "sweeten up" the slow-moving stocks of the shoes which they were trying to dispose of. At the same time, success of new styles in attracting the fancy of consumers would hasten the obsolescence of merchandise already in stock. If the new styles did not prove successful, on the other hand, the retailers would be in even a worse condition than formerly.

Much the same reasoning could have been applied by the manufacturer to his own situation, with the additional point that he would find himself confronted by an entirely new and particularly difficult marketing problem if his venture succeeded, since the merchandising of style goods is a very different matter from the merchandising of semi-staple commodities.

It may be concluded, therefore, that as a general rule the manufac-

² See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, chap. vi.

turer should keep well abreast of consumers' style preferences but should not make radical style changes purely for the purpose of applying an artificial stimulus to demand in a period of business depression.

June, 1926

M. P. M.

65. HOLLYWOOD TYPEWRITER COMPANY¹ I H.B.R. 240

COMMENTARY: Exporters frequently are confronted with the problem of handling orders which call for goods varying in model, style, or finish from those which constitute the basis of domestic production and for which production organization and operation have been planned. To grant such requests in some cases involves little extra cost and produces increased good-will. In other cases, particularly where the requests do not correspond to consumers' wants and preferences, the acceptance of such orders may be a costly and ineffective means of developing trade.

No invariable rule may be stated, but in deciding upon particular cases the value of making the variation as measured by its effect upon immediate and future sales must be balanced against the higher cost. Staple industries with narrow margins engaged in mass production cannot afford to accept small orders calling for variations in the product, because the cost of such changes tends to disrupt production schedules and impair the competitive position of the manufacturer.

In the present case, the desire of the Viennese agent to have Hollywood typewriters finished in conspicuous colors was apparently not based upon any important or fundamental wants of the consumers in that territory. Had the desire for change in color involved a real difference in satisfaction received from the product, the additional cost of finishing the product in desired colors would have had to be incurred. It appears that the request for bright finish was superficial. That finish would not have added to the salability of the product for the purposes intended, while the additional cost of manufacture would have decreased profit or increased price. The difference in color would, therefore, have had little effect in meeting the German competition with its temporary advantage of exchange rates or with its advantage of preferential tariffs. The decision of the Hollywood Typewriter Company seems, therefore, to have been correct.

May, 1926

H. R. T.

¹ Fictitious name used for purpose of disguise.

66. HARRISON STEEL CORPORATION^{1,2} I H.B.R. 242

COMMENTARY: The contract which was canceled in this case was a tonnage contract. Inasmuch as the material could not be put into process until specifications had been received from the buyer, the chief loss to the seller—the Harrison Steel Corporation—that resulted from cancellation was loss of expected profits. This made cancellation of orders on a tonnage contract far less serious than cancellation of a firm contract would have been, on which specifications had been given with the original order.

Cancellations of orders are undesirable and should be avoided or prevented whenever possible. The practice upsets business plans and interferes with orderly production. In this case, however, the facts that the contracts canceled were tonnage contracts and that acceptance of cancellations was an established practice in the industry placed an imperative obligation on the Harrison Steel Corporation to permit its customer to cancel the unfilled portion of the contract.

November, 1925

M. T. C.

¹ Fictitious name used for purpose of disguise.

² See also the commentary below and those on pp. 467 and 468.

67. RANDOLPH SHOE & LEATHER COMPANY^{1,2} I H.B.R. 244

COMMENTARY: This case is important as emphasizing, in the first place, the dangers of mistaking an unsound inflation for sound prosperity, and second, the difficulty, in a competitive business selling goods to retail dealers, of enforcing contracts after a break in general business has occurred. This company was dependent for its outlet upon possessing a marketing system which was both loyal and solvent; and, since to enforce the sales contracts would alienate the loyalty of some dealers and bankrupt others, the enforcement of contracts would have proved unwise as a general policy. A manufacturer is, presumably, in a position to analyze the general business situation more accurately than is the individual retailer; and this is a responsibility which he should assume.³ It should be noted, furthermore, that it is not worth while, as a general rule, to fight a number of small lawsuits when the legal costs are going to be in excess of the possible gain. The situation in the summer of 1923 was not comparable with the sit-

¹ Fictitious name used for purpose of disguise.

² See also commentary above, and those on pp. 467 and 468.

³ See Allagash Shoe Company, I H.B.R. 38; commentary, 2 H.B.R. 384.

uation in 1920, since business conditions were generally sound in 1923 and inventories were not excessive.

November, 1925

H. B. V.

68. AMERICAN SUGAR REFINING COMPANY¹ I H.B.R. 248

COMMENTARY: The extended situation of the sugar industry before the crash in 1920 was, in the main, the result of the difficult readjustments incident to a change from government control of prices to a competitive regime. The difficulties of these readjustments were multiplied because the transition occurred during a period of credit inflation. But the company officers seem to have been blind to what was occurring in their industry and in general business; and their failure to analyze the situation accurately proved expensive both to the company's customers and to its shareholders. Instead of expanding operations in 1920, they should have curtailed their activities and built up a strong cash position.

Once the commitments had been made, however, and orders had been booked, the responsibility rested upon the officers of the company to salvage as much as possible during the debacle. Sugar prices broke sharply during the early summer of 1920 and continued at disastrously low levels during 1921.²

The refusal to accept cancelations appears to have been the wisest policy for the officers, as representatives of the shareholders, to adopt; and they probably had no justifiable alternative. It was not feasible for the company to allow customers to repudiate their contracts while keeping its own, since such action would have threatened the solvency

¹ See also the commentaries on page 466, above, and page 468, following.

² The movement of sugar prices, 1917-1923, is illustrated by the following table:

RAW SUGAR PRICES

Unit: Average of one price weekly in cents per pound; Cuban 96 deg. centrifugal, including import duty, at New York.

	1917	1918	1919	1920	1921	1922	1923
January.....	5.20	6.00	7.30	13.00	5.40	3.60	5.34
February.....	5.20	6.00	7.30	11.90	5.30	3.71	6.61
March.....	5.50	6.00	7.30	17.90	6.10	3.95	7.27
April.....	6.20	6.00	7.30	17.70	5.40	3.95	7.75
May.....	6.10	6.00	7.30	20.90	4.90	4.09	8.11
June.....	6.00	6.00	7.30	19.70	4.70	4.56	7.63
July.....	6.60	6.10	7.30	17.60	4.40	5.07	6.83
August.....	7.30	6.10	7.30	13.40	4.70	5.20	6.01
September.....	7.00	7.00	7.30	10.70	4.30	4.90	6.80
October.....	6.90	7.30	7.30	8.30	4.20	5.44	7.60
November.....	6.90	7.30	7.30	6.80	4.10	5.59	7.31
December.....	6.30	7.30	10.30	5.30	3.70	5.65	7.39
Average.....	6.30	6.40	7.50	13.00	4.80	4.64	7.05

Source: *Journal of Commerce*.

of the company. Even as the situation was handled, it proved necessary to suspend common dividends for several years in order to conserve the cash resources of the company.

December, 1925

H. B. V.

66. HARRISON STEEL CORPORATION¹ I H.B.R. 242;
2 H.B.R. 466

67. RANDOLPH SHOE & LEATHER COMPANY¹ I H.B.R. 244;
2 H.B.R. 466

68. AMERICAN SUGAR REFINING COMPANY I H.B.R. 248;
2 H.B.R. 467

COMMENTARY: These three cases raise the same question under somewhat different conditions: whether to permit the cancelation of an order by a customer. The difficulty involved in answering the question is one of policy rather than one of law, because there is ordinarily no legal right to cancel an order that has been accepted. This general proposition is subject to several apparent exceptions. In the first place, the unaccepted order is merely an offer that may be withdrawn before it is accepted. Though the point is not equally clear in all the cases, it may be assumed that in each of those before us there has been an acceptance of the order by word or act. Again, a power to cancel or modify the contract of purchase may be reserved to the purchaser within a certain time limit, either expressly or impliedly by reference to past dealing or a local or trade custom. In the absence of definite proof we may assume that, except in the steel company case, no such defense existed in the cases before us. Finally, it must be remembered that though one may be guilty of a breach of contract when he cancels an order, it may be improper to pile up the claim for damages against him by refusing to pay attention to the anticipatory breach and by continuing to manufacture the goods that are not wanted.

Even if the cancelation is without a legal basis, it does not follow that it is worth while to insist on one's legal rights by a series of petty suits. Even if such suits would not result in burdens that the small dealer could not bear, they might result in an estrangement of those who for practical purposes are part of the wholesaler's or manufacturer's organization for distribution. It may make a great deal of difference whether the cancelation in question is an isolated phenomenon or the result of a general condition of business more likely to be

¹ Fictitious name used for purpose of disguise.

foreseen by the manufacturer than by the dealer. The date of the cases before us, 1920, indicates that the cancelations were due to such a general condition.

Special circumstances may have justified the practice of the Randolph Shoe and Leather Company in making an example of flagrant offenders regardless of the other considerations mentioned. The facts in the case, however, hardly suggest such special circumstances. The more normal reaction was the permitting of the cancelation described in the Harrison Steel Corporation case, in which, no doubt, the trade custom referred to was an important factor.

The case of the American Sugar Refining Company presents an unusual situation. Under normal conditions, a company of that type would act as a producer distributing its output through established, continuous channels. The welfare of the whole group then is important, and the strongly entrenched producer might be expected to share part of any temporary losses, in order to maintain its continuous relationships with its distributors. The sugar industry, however, had become highly speculative during and after the war. The company, in view of its customers' insistent demands, contracted for supplies in a market whose prices had risen to extreme heights through widespread speculative buying. Some of the orders, apparently, were placed by customers whose continued trade and good-will were scarcely expected. The question, then, was as to who should bear the inevitable severe losses. As one of the leaders in its industry, the company acted in this crisis in such a way as to exert a restraining influence upon future speculative commitments by refusing to permit breaches of contract; at the same time, the company endeavored to assist its established customers in carrying out the terms of their agreements.

May, 1926

N. I.

69. BARTELLE COMPANY¹ I H.B.R. 255

COMMENTARY: It is not always good policy to exercise one's legal rights or use all one's legal powers against a delinquent opponent. The unpaid seller of goods not only has the right to sue for his claim and to press the claim against an embarrassed debtor, but a choice of rather drastic powers of self-help. Among these are: a lien, extended under some circumstances into a power of stoppage in transitu; the power to resell articles not paid for on the account of the delinquent buyer; the power to rescind the sale. It appears that none of these plans seemed desirable in the stage that the case reached. What the seller thought

¹ Fictitious name used for purpose of disguise.

of doing was a little different: he wanted to use the goods, unconditionally appropriated to the contract of the delinquent buyer, for other customers and eventually to replace them with other goods. This conduct was not approved by his legal adviser in the absence of the written consent of the buyer. Title had in all probability passed to the buyer. In the course of negotiations with the buyer, the lawyer came to the conclusion that it would be best to abandon such negotiations and make sure of the collection of the amount past due. The case illustrates the difference between the science of knowing one's legal rights and powers and the art of using them under precarious conditions.

May, 1926

N. I.

70. COXINGTON METAL PRODUCTS COMPANY¹ 1 H.B.R. 258

COMMENTARY: A decision not to follow a uniform policy in making all purchases was undoubtedly sound in this case, and is almost universal in its application. The exceptions are those companies wherein the materials purchased are so few in number and so similar in nature that the purchasing methods do not vary in their adaptability.

A stereotyped form of purchase agreement for all articles and all market conditions would not provide maximum purchasing economies. In certain instances, the form of agreement is determined by the vendor through his unwillingness to sell on any basis other than the form of agreement established by the custom of the trade. From the standpoint of the purchaser, other considerations make particular forms of purchase agreement desirable. The degree of definiteness in quantity, quality, price, delivery, and payment conditions varies with different articles and in a large measure determines the type of purchase agreement.²

Uniformity of policy with respect to functions of purchasing other than the purchase agreement may also be impractical. Certain articles lend themselves readily to detailed technical specifications. Other articles contain properties which cannot be adequately described and the quality must be left to sight. Competition may be adequate with one bidder in some instances, while in others wide publicity of purchase requirements is necessary. The purchasing policy must be adapted to specific conditions if maximum purchasing economies are to be secured.

December, 1925

H. H. T.

¹ Fictitious name used for purpose of disguise.

² See Winnick Canning Company, 1 H.B.R. 264; commentary, 2 H.B.R. 471.

71. SWEETNAM PRODUCTS COMPANY¹ I H.B.R. 261

COMMENTARY: Specifications to be used for the purposes indicated in this case must describe the material desired, in terms which:

1. Enumerate the qualities essential to the particular uses to which the material is to be put;
2. Define suitable qualitative units of measure;
3. Embody clearly defined tolerances, as regards the practical operation of such specifications under contract.

Furthermore, the contract should:

1. Provide a mutually satisfactory method of measuring quality;
2. Provide mutually satisfactory methods of relating various qualities thus measured in the determination of the aggregate quality;
3. Relate the prices to be paid to the quality as determined according to a prearranged schedule.

In purchasing materials such as coal, one may not arbitrarily reject shipments not conforming to rigid specifications, nor in many cases would it be wise to do so. Some sort of a sliding scale of payments, therefore, with provision for reasonable tolerances and amicable adjustment of disputes, is essential. The Sweetnam Products Company fulfilled these requirements of good purchasing in a reasonable and satisfactory manner.

December, 1925

H. H. F.

¹ Fictitious name used for purpose of disguise.

72. WINNICK CANNING COMPANY¹ I H.B.R. 264

COMMENTARY: Several considerations arising in connection with the purchase of cans made it advisable for the Winnick Canning Company to accept the offer of the manufacturer to make a three-year contract. A distinct advantage was secured in the assurance of an ample supply of cans. The can manufacturer also rented to the Winnick Canning Company the machines upon which the canning operation was performed, and these machines did not accommodate satisfactorily the cans of other makers. In this instance, therefore, a closer relationship with the manufacturer than usual was desirable.

The absence of the above considerations, however, might well make the long-term contract form of purchase agreement inadvisable. An agreement to contract for all purchases from one source for so long a

¹ Fictitious name used for purpose of disguise.

period has several disadvantages. The purchaser has "all his eggs in one basket." It is not always possible to predict accurately the quantity of an article to be used, and the company may be forced to accept deliveries of articles not needed on account of a change in plans. In the same way, there is a possibility of paying higher prices during the period of the contract than otherwise would be necessary, particularly if the vendor has quoted a higher price because of lack of information as to the future course of the market. If articles are subject to improvements in design, there is also danger in making commitments in advance for a long period.

Protection against price fluctuation was secured in part by the agreement to base prices on the prevailing prices of tin plate at the first of the year. The contract, therefore, while drawn up for three years, was virtually an annual contract, since price was the most important element, other than delivery, in the purchasing agreement. Such protection is possible only when the materials purchased are closely related to a primary raw material.

It would seem that the decision to purchase under the long-term contract was sound but could not be applied in other instances without full consideration of the particular conditions under which the article was to be purchased.

December, 1925

H. H. T.

73. MARTEL SHOE MANUFACTURING COMPANY¹ I H.B.R. 268

COMMENTARY: Changed methods of purchasing during a period of poor business conditions with the change from a "sellers'" to a "buyers'" market, and the production of varied styles of shoes appear to be particularly significant in the decision of the Martel Shoe Manufacturing Company to spread its purchases more widely.

A depression in general business or in an industry, with the resulting change from a sellers' to a buyers' market, necessitates the purchasing of supplies more frequently and in smaller quantities. The arguments of quantity purchasing to secure preferential terms become less effective. Competition among vendors for orders is more keen and there are greater possibilities for obtaining better terms from new sources of supply. At the same time, regular vendors are eager to retain patronage, and a company should have little difficulty in securing price, quality, and service from the established source of supply, equivalent to that available at other sources. Increased importance is attached to small orders during poor business conditions.

¹ Fictitious name used for purpose of disguise.

The transition from a sellers' to a buyers' market evidently had not been recognized by this company's established sources of supply. An assurance of orders as a result of a long period of past patronage might have caused a neglect of service on the part of some vendors. More forceful purchasing tactics should serve to bring such vendors into line without distributing purchases to untried sources of supply. A threat to purchase elsewhere, substantiated by a knowledge of the price, quality, and service obtainable, often suffices to secure lower prices and better service. The value of past relationships, particularly in view of the Martel Shoe Manufacturing Company's policy in 1920 with regard to contract cancelations, should have been salvaged if possible. It is doubtful, therefore, if the slackening in demand for the company's products was sufficient justification for spreading purchases among numerous sources of supply.

A style trend in production not only diversifies the type of supplies required, thereby reducing the quantities purchased, but also makes accurate predetermination of material requirements less possible. Less reliance can be placed on past experience in planning purchases. This change is significant in considering whether the former standard sources of supply were adaptable to the needs of the company under the new conditions. In this sense, differentiation should be drawn between the transfer of purchases and the distribution of purchases among numerous sources. A transfer to a limited number of new sources might serve the same purpose as the spreading of purchases.

On the assumption that the standard sources of supply were as well equipped to fill small orders as the other sources available, there would appear to have been no impelling necessity for changing to new sources. The failure of the company to secure preferential terms may perhaps have been the result of an inability on the part of the supplying vendors, rather than an unwillingness. A further reduction in the quantities purchased from each of several vendors would not lead to preferential service.

The decision appears to have been based largely, therefore, rather on the necessity of purchasing supplies from numerous sources because of a variation in the types of supplies desired, than on failure of the policy of concentrating purchases with a limited number of sources to remain effective under changed business conditions. The presence of unusual conditions related to the change in style of product qualifies the value of the decision as a business precedent.

May, 1926

H. H. T.

74. BALLOU STOVE COMPANY¹ I H.B.R. 270

COMMENTARY: In consideration of the Ballou Stove Company's policy of concentrating purchases, attention should be given to the dissimilarity existing between its policy and that of the Martel Shoe Manufacturing Company.² The policies differ in the degree of concentration. In the case of the Martel Shoe Manufacturing Company, purchases were concentrated with a few vendors, while the Ballou Stove Company had purchased each type of material from only one source of supply.

The conditions relating to the failure of the company supplying gas cocks to render satisfactory service make it evident that this experience could be of little value to the Ballou Stove Company in determining the wisdom of its purchasing policy. Past renewals of contract at increased prices, the lower prices that could be secured elsewhere, and the fact that the contract had only one month to run give no indication of the underlying reason for the supplying company's hostility. Too great importance, therefore, cannot be attached to the relationship existing between the two companies in a consideration of the policy of concentrating purchases.

Special circumstances involved in the purchase of unique supplies manufactured to rigid specifications do not warrant the adoption of methods in effect among other companies, without consideration of the differentiating factors. Few suppliers are prepared to give preferential service on special order materials. It is for this reason that contract purchases usually are effected. Familiarity with the production of such articles provides an advantage to the established source of supply.

Concentration, however, involves the risk of delayed production through the failure of one vendor to deliver in accordance with his agreement. Delay or default in delivery usually is caused by transportation difficulties or unsatisfactory conditions at the vendor's plant.

Transportation conditions as a factor against concentration can easily be overemphasized. Embargoes and traffic congestion occur infrequently. Emergency deliveries by truck, when feasible, often are depended upon as insurance against delayed delivery. A fairly large supply of the materials carried in stock should, in most instances, constitute an adequate safeguard.

Unsatisfactory labor conditions may be of general nature or restricted to a particular plant. If the risk is uniform throughout an industry, a wider distribution of purchases is warranted. A careful selection of vendors should assist in carrying out a policy of concentrated purchases.

¹ Fictitious name used for purpose of disguise.

² I H.B.R. 268; commentary, 2 H.B.R. 472.

It is apparent that a decision to spread purchases might well vary with the degree to which the material or supply was a special article, the importance of quality, the quantity to be purchased,³ the conditions surrounding the operation of the vendor's plant, and other factors.

May, 1926

H. H. T.

³ See Martel Shoe Manufacturing Company, 1 H.B.R. 268; commentary, 2 H.B.R. 472.

75. QUALITY TEA COMPANY¹ 1 H.B.R. 272

COMMENTARY: By far the most important problem confronting the Quality Tea Company was that of whether to substitute direct-to-retailer distribution for distribution through wholesalers. Direct-to-retailer distribution by a company which previously has sold through wholesalers ordinarily involves increased selling expense, increased risks, and increased capital requirements, because the functions of the wholesaler must be performed whether the wholesaler is employed or not. On the other hand, direct contact with retailers and consequently less remote contact with consumers is afforded. There is the possibility that the larger profit margin secured by discontinuance of the wholesaler may offset wholly or partially the increased expense of direct-to-retailer distribution. There is, likewise, the possibility of increased stability of sales.

Increased sales expense would be the consequence of the proposed change in policy of the Quality Tea Company. More calls would have to be made by salesmen and more salesmen would be needed to maintain the volume of sales already attained. However, the increase would not be so great as it might have been had the Quality Tea Company not maintained a force of missionary salesmen who already were calling upon retailers at less frequent intervals. Increased selling expense also was involved in the necessity of handling a very much larger number of customers and orders, each of much smaller average size.

The increased risks would consist primarily of the credit risks involved in the substitution of the large number of retail accounts whose credit was admittedly of lower quality than that of wholesalers. However, the large number of accounts would furnish a broader base. Some increase in risk and expense likewise was involved in the possible necessity of maintaining a larger inventory. Because of its sectional distribution, the Quality Tea Company probably would not find this so

¹ Fictitious name used for purpose of disguise.

important a point as it would were it disposing of its product over an area which would require the establishment of warehouses or warehousing facilities at strategic shipping points. Furthermore, with changes in business conditions, the risks would be increased with the increase in the size of the organization and the increase in the more or less inflexible expense budget. The extension of credit for longer terms and for maintaining larger stocks would increase to some extent capital requirements.

The Quality Tea Company undoubtedly would secure the advantage of direct contact with retailers, which would enable it to carry on more aggressive and intensive sales work with each retailer than could be expected from the jobber's salesmen, whose interest was divided among hundreds or thousands of products. The increased sales expense which would be necessary to secure this direct contact could be estimated with some degree of accuracy. An opinion could, therefore, be formed as to the extent to which the larger profit margin secured by the Quality Tea Company by the addition of the jobber's margin to its own previous margin would offset this expense for the volume of sales which might be expected. In so far as there might exist a tendency toward speculative buying of tea by wholesalers, continuous direct selling effort to retailers of a product which varied little in the rate of consumption would have a tendency to increase the stability of sales, a result of benefit to all concerned.

It seems that, as a rule, a product which is purchased in small amounts by the retailer on the basis of personal solicitation is not adapted to direct-to-retailer distribution by the manufacturer or merchant who is selling a narrow line of products. The cost per sale becomes prohibitive for many products. It is probable that the success of the direct-to-retailer distribution in this case was due to the buying habits of retailers for this product, which did not require as frequent calls as were furnished by the average wholesale grocer, and to the larger than average margin which this type of product ordinarily yielded. The decision of the company, therefore, may be considered sound, only because of the exceptional conditions which surround the selling of tea as compared to the common type of grocery product.

May, 1926

H. R. T.

76. DRURY HOSIERY MILLS¹ I H.B.R. 276

COMMENTARY: The first fact which stands out significantly in this case is the growth of the demand for seasonal styles in hosiery. That

¹ Fictitious name used for purpose of disguise.

development introduced a risk of loss from style depreciation which was not inherent in the trade in staple goods. Despite the risks involved in producing and marketing seasonal style goods, the demand for that type of merchandise, on the one hand, and, on the other, the severity of the competition from southern mills on staple hosiery, had induced the Drury Hosiery Mills to attempt to increase the company's sales of style goods. The company's product, however, because of the type of machinery used and the scale of prices, fitted into a late stage in the style cycle, where styles were reproduced which had proved to be popular in more expensive materials and construction.

The chief market for such seasonal style merchandise was to be found in the stores, located in urban shopping districts, which had sufficient volume of sales to permit them economically to carry wide varieties of colors and patterns in stock and to assume the risk of style depreciation. Department stores constituted a large segment of that market. Those stores also sold children's hosiery and men's hosiery.

Although the company's decision to solicit directly the patronage of department stores in urban districts was sound, it was by no means devoid of disadvantages. The company hoped to retain the services of wholesalers for distributing its products to small town and rural stores, and to unit stores in suburban markets. Yet it was inevitable that some wholesalers would object to such a division of the market. Thus the established relationships with wholesalers were to be jeopardized. In selling to department stores, furthermore, the orders were likely to be smaller, on the average, than the orders received from wholesalers, and also to be for assorted case lots. The manufacturing company would incur expenses for carrying heavier stocks of merchandise, and since that merchandise frequently had to be finished in advance of the receipt of orders, the company would suffer losses on styles of merchandise which became unpopular before the entire stock on hand had been sold. A larger sales force would be required to solicit orders from department stores, since they were more numerous and would buy more frequently and in smaller lots.

The advantages of selling directly to department stores in this case were controlling. As has been stated, department stores constituted a substantial segment of the market for such goods as the Drury Hosiery Mills produced. Department store executives frequently prefer to buy such merchandise directly from manufacturers. A direct route from mill to retail store minimizes the risk of mistakes in merchandising goods which are subject to frequent style changes. From the manufacturer's standpoint, intimate relationships with retailers aid in sensing new style developments.

As regards the relations with wholesalers, the decision of the com-

pany to make seasonal style goods was a turning point. Wholesalers could not be expected to carry as large stocks of seasonal style goods as they had of staple goods. Wholesalers were likely to be cautious in ordering style merchandise. Inasmuch as the Drury Hosiery Mills, furthermore, proposed to accept no orders for less than case lots, the wholesalers would have the same opportunity as previously to sell Drury hosiery to small retailers and to obtain small fill-in orders from large retailers. In selling directly to department stores on this plan, therefore, it was not probable that any substantial volume of sales, which they otherwise would have made, would be taken away from the wholesalers. The Drury Hosiery Mills, by this change in policy, would compete with other manufacturers in a field in which wholesalers were not dominant.

The decision in this case was governed principally by the advantages which accrue from having seasonal style merchandise traverse as direct a route as possible from manufacturer to retailer.

November, 1925

M. T. C.

77. CARDIFF ROOFING COMPANY¹ I H.B.R. 280

COMMENTARY: The Cardiff Roofing Company, in determining a distribution policy for its new product, had to answer three questions, among others:

1. Should the company continue its old methods of distribution, selling to plumbing wholesalers, to steamfitters direct, and to industrial users?
2. If not, should it sell to wholesalers exclusively?
3. If it decided to sell to wholesalers, should it sell to selected wholesalers or to all wholesalers in the territory?

The advantages of continuing its old method of distribution were chiefly the assurance which was furnished by the experience of the company with that method, and the possible objections to change by those who had been purchasing from the Cardiff Roofing Company. The disadvantages seem to be decisive against it. The satisfactory distribution of the new product required increased and continuous sales effort beyond that which had been expended in the past. Furthermore, the old system had been unsatisfactory because of the inability of the Cardiff Roofing Company to give as satisfactory delivery service as did wholesalers, while the credit risks were particularly great and unsuited for handling by the manufacturer.

¹ Fictitious name used for purpose of disguise.

The second proposal, to sell to wholesalers exclusively, promised satisfactory delivery service by making stocks of the product available at numerous points in the territory. It would relieve the company of the risk and labor of handling retail credits, and assure the company of increased sales effort, provided wholesalers became really interested. It is assumed that selling to wholesalers exclusively would enlist their interest. It would appear that direct distribution to retailers whose orders were small and required prompt delivery could be handled more economically by wholesalers than by the manufacturer's sales subsidiary, which would need to establish an extensive and far-reaching organization to take the place of the facilities furnished by wholesalers. If it was clear to the Cardiff Roofing Company that wholesalers must be used for the distribution of the new product, it would seem to have been best to introduce the product to them at the outset rather than to develop a basis for ill will by employing some other method at the outset with the intention of turning to wholesalers later.

As to the last question, of selling to selected wholesalers rather than to wholesalers in general, the decision of the company was correct, provided the expected increase of selling effort on the part of wholesalers materialized, and provided wholesalers were so chosen that no sections of the market were left untouched. If the wholesalers selected included among their customers a great majority of the retail outlets for roofing, then the use of selected wholesalers is to be commended. If the clientele of the wholesalers left many gaps, however, so that many steamfitters were not called upon, it would appear that the selected wholesaler plan should have been superseded by a general wholesaler plan, at least after the product had been introduced and had become known to retailers and to wholesalers.

May, 1926

H. R. T.

78. CENTURY HARDWARE COMPANY¹ I H.B.R. 283

COMMENTARY: This cooperative association was gradually establishing itself on a firm business foundation, but in doing that it was nullifying the advantage of low operating expenses which it nominally had appeared to enjoy. The case illustrates how the cooperative association was led to render more and more of the services of wholesale merchants, even to the point of employing traveling salesmen, and how it became necessary for the association to provide for financial contingencies, such as fluctuations in inventory values, inherent in a mercantile business.

¹ Fictitious name used for purpose of disguise.

Although such an association as this may be successful, so long as it is well managed and retains the sentimental loyalty of its members, the experience of this association indicates why a cooperative society fundamentally is not likely to have a permanent advantage over privately owned and privately managed wholesale establishments.

October, 1925

M. T. C.

79. MENNEN COMPANY VERSUS FEDERAL TRADE COMMISSION¹

I H.B.R. 287

COMMENTARY: The court points out that "the complaint contains no intimation that the Mennen Company has any monopoly of the business of manufacturing and selling toilet articles or that it has the ability or intent to acquire one. So far as appears the Mennen Company, acting independently, has undertaken to sell its own products in the ordinary course without deception, misrepresentation, or oppression, and at fair prices, to purchasers willing to take them upon terms openly announced.

"... Nothing is alleged which would justify the conclusion that the public suffered injury or that competitors had reasonable ground for complaint. The allegation that its practice of varying discounts tended unduly to hinder competition between distributors of respondent's products to retailers or directly to the consuming public is a pleader's conclusion."

After the above conclusions had been drawn, the statement of the court is noteworthy that: "The Mennen Company had the right to refuse to sell to retailers at all, and if it chose to sell to them, that it had the right to fix the price at which it would sell to them, and that it was under no obligation to sell to them at the same price it sold to the wholesalers. It did not discriminate as between retailers but sold to all retailers on one and the same scale of prices. And it did not discriminate as between wholesalers but sold to all wholesalers on one and the same scale of prices. There is nothing unfair in declining to sell to retailers on the same scale of prices that it sold to wholesalers, even though the retailers bought or sought to buy the same quantity the wholesalers bought." Further, the court pointed out that since the persons who constituted the mutual or cooperative associations were retailers, the company was within its rights in classifying the associations as retailers.

Sound business policy frequently calls for a selection of the type of

¹ Circuit Court of Appeals, Second Circuit. Decided March 13, 1923. 288 Fed. 774.

customers to whom a manufacturer will sell his products, and it is essential that the right to make such a selection should be preserved by the courts. In this particular case, the cooperative associations could not provide complete wholesale distribution for the manufacturer; only a small percentage of the retail druggists in the United States are members of such associations and the limitations of those associations in granting credit and in providing traveling salesmen for receiving orders² render it improbable that that type of association will soon supplant the independent wholesale merchants. The Mennen Company needed to have its products available for sale in a large number of retail drug stores. Hence it would have been unwise for the company to undermine its wholesale distribution by discouraging wholesale merchants from handling its products. The services which those merchants rendered were essential to the Mennen Company in order to secure the patronage of large numbers of retailers in whose stores the Mennen Company properly desired to have its products carried.

The reaffirmation of the right to refuse to sell, in the absence of monopolistic control or underhand or unscrupulous trade practices, is in accordance with a series of sound court decisions. Unless a manufacturer, who is operating his business in a straightforward manner, is permitted legally to refuse to accept the patronage of undesired customers or types of customers, it is probable that he would be subjected to intolerable blackmail and other abuses.

In conclusion, it is worth pointing out that the case of the Mennen Company was stronger than was recognized by the court. As in so many cases regarding sales methods that have come before the courts for decision in recent years, the full strength of the business firm's case was not brought out. In this instance the company accepted no orders for direct shipment for less than $1\frac{1}{2}$ gross, a quantity larger than any individual retailer, except in very unusual circumstances, would buy. On quantities from $1\frac{1}{2}$ to 10 gross the discounts to "retailers," including the cooperative associations, and to wholesalers were the same—a trade discount of 10% off the list price and a cash discount of 5%.³ When the cash discount was taken, these two discounts were equivalent to $14\frac{1}{2}\%$ of the list price at which the merchandise was to be resold. This discount was sufficient to cover the operating expenses, apparently, of the cooperative buying associations.

On quantities of 10 gross or more the trade discounts granted to wholesalers were 10% and 5%, with a cash discount of 3%. When the cash discount was taken, these terms were equivalent to 17.06% of the list price. These terms were granted only to wholesalers. Hence,

² See *Century Hardware Company*, 1 H.B.R. 283; commentary, 2 H.B.R. 479.

³ *Findings and Orders of Federal Trade Commission*, Vol. IV, p. 275.

on purchases of 10 gross and more the differential between the terms to wholesalers and the terms to cooperative associations amounted to 2.56% of the list price. This differential was less than the average sales force expense of typical drug wholesalers, which in 1923 was 3.6% of net sales.⁴ By employing traveling salesmen and granting credit, the wholesale merchants rendered services which the cooperative associations did not provide, and the differential in favor of the wholesalers was less than the average wholesaler's expense for those services. It is evident, therefore, that instead of handicapping the cooperative associations, the terms offered to them by the Mennen Company placed them in a strong position to compete with wholesale merchants in the sale of this merchandise.

October, 1925

M. T. C.

⁴ Bureau of Business Research, Harvard University, *Bulletin No. 46, Operating Expenses in the Wholesale Drug Business in 1923*, p. 16.

80. MARCH BOTTLING COMPANY¹ I H.B.R. 298

COMMENTARY: This company's problem in proposing to sell to chain stores is one which many manufacturers have had to meet when they were already selling to unit stores. The difficulty arises from the fear on the part of unit stores of the competition with chain stores; the price policy of chain stores, applying to goods which both unit and chain stores handle; and the relative importance of both types of distributors to the manufacturer who is seeking widespread distribution.

As a general principle, ginger ale is a product which should be sold through the largest possible number of outlets, though, of course, it must not be forgotten that in most communities a minority of outlets sell the bulk of the goods purchased by the community. Furthermore, it would have been desirable for the March Bottling Company to increase its sales, if possible, in such a way as to decrease the existing seasonal variation in volume.

Whether or not the result of selling to chain stores would increase profits for the March Bottling Company would depend upon the continuance of both chain and independent stores in the purchase of March ginger ale at profitable prices. It must be recognized that as an institution the chain stores are to be regarded as permanent, even though the extent of their future development cannot be predicted. They already control a large number of outlets reaching a very considerable proportion of some communities which it would be desirable for the March Bottling Company to reach. Their continuance in the purchase

¹ Fictitious name used for purpose of disguise.

of March ginger ale was favored by the relatively low price at which the product was sold. It was discouraged, however, by the tendency of chain stores to emphasize their own private brands of such products, and by the fact that they received no special buying advantage from the March Bottling Company, and that even if they continued to buy they would attempt to secure lower prices, in which attempt their success would depend upon the relative bargaining position of the March Bottling Company. Obviously, it would be undesirable for the company to become dependent upon a very few large chains for the bulk of its business.

The immediate result of selling the ginger ale to chain stores would be an increase in the number of outlets for the product. Against that increase was to be placed the possibility that independent stores, in their opposition to price-cutting and to chain stores, and in their desire to sell products which could not be made the subject of invidious price comparisons, would refuse to handle the March product. This argument, however, was not likely to reduce the necessity of handling a product which was priced as favorably as that of the March Bottling Company, while the opposition of stores to handling the same products as chain stores is, in the opinion of the writer, considerably overestimated. Likewise, there is little evidence to show that the loyalty of unit stores to firms which adopt the policy of not selling to chain stores expresses itself in tangible terms of sales preference given to those firms. It appears, therefore, that the net result would be an increase in the number of outlets, with the possibility of a slightly lessened interest on the part of independent stores.

There is no adequate reason for believing that the buying habits of the chain-store public would continue to be far different from those of purchasers from other types of grocery stores. There is good reason, therefore, for believing that the tendency to purchase quart sizes also in winter would become true of chain stores as it had become true of unit stores. It appears that the conclusion of the company was correct, but that the March Bottling Company with a local market needed to exercise caution lest it find itself in the precarious position of selling too large a proportion of its outlet to a very few distributors.

May, 1926

H. R. T.

81. PENWICK GROCERY COMPANY¹ I H.B.R. 301

COMMENTARY: The merchandise sold by the wholesale firm in this case consisted almost entirely of convenience goods—a type of mer-

¹ Fictitious name used for purpose of disguise.

chandise which consumers habitually purchase at easily accessible retail stores. In general, consequently, it was to the advantage of the wholesale firm to have for customers as large a number of retail grocery stores as possible. It thereby could obtain the maximum opportunity for selling staple groceries, in marketing which it had no outstanding advantage over other wholesale grocers; and for merchandise bearing the company's private brand, dense distribution was desirable in order to minimize the risk that consumers who preferred the Penwick brand would accept substitutes in stores where that brand was not available.

Under the circumstances, to be sure, something could be said in favor of granting the request received from Lawson. His store was the leading grocery store in the community and, therefore, might be expected to bestow some local prestige on any brand for which it held an agency. It was to be expected that Lawson's store would enjoy a greater share of the patronage of the summer visitors than was received by any other grocery store in the town, and some benefit would accrue to the wholesale firm were its brand to be featured aggressively to this clientele by Lawson. Lawson's credit also was superior to that of his competitors.

Despite those advantages, however, the Penwick Grocery Company acted wisely in refusing to grant the agency. Although the sales to Lawson would have been increased by granting the agency, it was by no means certain that the gain in the sales of fancy groceries to Lawson would not be offset by the loss in the sales even of that type of merchandise to the other stores; and the loss of the patronage of the other stores inevitably would have reduced substantially the wholesale firm's sales of staple groceries in the town. The governing consideration in the decision properly was the effect that the granting of the agency would have on the company's policy toward retailers in other communities. A general policy of granting exclusive agencies to retailers for the sale of convenience goods would not have been sound, and no exception should have been made in this case.

October, 1925

M. T. C.

82. DEVON PHONOGRAPH COMPANY¹ I H.B.R. 303

COMMENTARY: The central question in this case was whether to grant exclusive agencies to wholesalers for distributing the company's products. Two alternatives suggest themselves: the first, for the company to perform the wholesale function itself, by selling directly to

¹ Fictitious name used for purpose of disguise.

retailers; the second, for the company to sell to wholesalers generally.

Because of the high unit price of the article and the need for careful supervision of retail merchandising methods, eventually the alternative of selling directly to retailers would demand consideration. When this case was recorded, however, the company apparently had dismissed that alternative for the time being. The issue, therefore, was whether to grant exclusive agencies to wholesalers or to sell generally to wholesalers who carried this type of merchandise.

A wholesaler ordinarily provides a sales organization for reaching a large number of scattered retailers and spreads his wholesale marketing expenses over numerous lines of merchandise, no one of which is accorded preferential treatment. It is only under exceptional circumstances, therefore, that an exclusive agency is granted to a wholesaler for marketing a particular article. In this case, however, exceptional circumstances existed which warranted the granting of exclusive agencies to wholesalers, at least for a temporary period. The product of the company belonged to the class of specialty goods; consumers whose buying motives were properly aroused could be expected to seek out the stores where these phonographs were offered for sale. In order to achieve that end, active sales promotion efforts by the retailers were essential and it was desirable, therefore, that retailers should be selected who would aid in carrying out the company's program in merchandising the phonographs. The proper selection of retailers and direction of their sales promotion activities could be attained by means of exclusive agency contracts with selected wholesalers, but not by selling to wholesalers generally who would resell promiscuously to retailers wherever orders could be picked up. For such merchandise as this, a careful selection of wholesalers and retailers was required in order to develop and control a coordinated program of sales promotion.

November, 1925

M. T. C.

83. STANDARD FASHION COMPANY VERSUS MAGRANE-HOUSTON COMPANY¹ I H.B.R. 305

COMMENTARY: Under the terms of the exclusive agency contract, the manufacturing company agreed to sell patterns to the retailer at a discount of 50% from the retail list price. The company further agreed to furnish advertising matter and publications on terms stated and to grant the privilege of returning discarded patterns under stated conditions. The retail company, in turn, agreed to carry continually

¹ Supreme Court of the United States. Argued January 25, 1921. Reargued January 16, 1922. Decided April 10, 1922. 42 Sup. Ct. 360.

a stock of patterns amounting to \$1,000 at net cost price, to purchase a substantial number of fashion sheets, to maintain the location of the department without change except on approval of the manufacturing company, to permit inspection of stock, to pay proper attention to the sale of Standard patterns, and to reorder promptly as patterns were sold. The retail company further agreed not to sell or allow to be sold on its premises during the term of the contract any other make of patterns and not to sell Standard patterns except at labeled prices. This is a typical exclusive agency contract, except that in the statement of facts in the court's decision there is no indication that the manufacturer agreed to grant the retailer an exclusive territory within which to exercise his so-called agency privileges. If no such provision was incorporated in the agreement, then the so-called exclusive agency plan properly could be interpreted either as a means of checking competition or as a scheme for controlling resale prices. The grounds for the court's decision would have been substantially stronger if the absence of an exclusive territory provision had been brought out.

If the contract did include a provision that the retailer should have the exclusive right to sell Standard patterns within a specified territory, then the Standard Fashion Company was seriously remiss in not bringing that fact effectively to the attention of the court and utilizing it for the support of its practice. The provision in the agreement whereby the "agent" was to sell only one make of patterns is not an essential feature of an exclusive agency system, but even if that feature is not included in the agreement, there is always at least an implication that the "agent" will use aggressive sales methods on any product for which he accepts an agency, and he cannot do that effectively without restricting the number of brands for which he is "agent." Ordinarily the acceptance of an exclusive agency means that the "agent" will concentrate his sales efforts primarily on a single brand or make of merchandise within a particular class of goods. In return for this concentration of sales effort, he receives protection within a specified territory to assure him that he will reap the full benefits of the sales efforts which he puts forth.

Despite the legalistic discussion of the issues in this case, the so-called exclusive agency system, with provision for concentration of sales effort on the one hand and the grant of exclusive territory on the other, is a sound and effective means of merchandising certain types of goods. It is widely used, for example, by manufacturers of automobiles, electrical washing machines, vacuum cleaners, farm implements, shoes, and numerous other commodities which can be classified as specialty goods.²

² See Copeland, M. T., *Principles of Merchandising*, A. W. Shaw Company, Chicago, 1924, pp. 117-129.

It would be quite unfortunate, from the standpoint of the development of sound merchandising principles, for a *bona-fide*, mutually advantageous exclusive agency system to be held illegal. Such a contingency appears to be remote, providing, in future cases involving such arrangements, the merchandising principles involved are brought out. Because of the doubt as to whether the agreement in this particular case provided that the retailer was to enjoy protection within a specific territory, this case should not serve as a precedent for disrupting exclusive agency agreements that are based on sound merchandising principles.

October, 1925

M. T. C.

84. FEDERAL TRADE COMMISSION VERSUS RAYMOND BROTHERS—
CLARK COMPANY¹ 1 H.B.R. 310

COMMENTARY: The legal question presented was one of statutory interpretation: What is an "unfair method of competition" within the meaning of the act creating the Federal Trade Commission? After all the technical legal elements of the definition were determined—such as the relation of the conduct to interstate commerce, the force and effect of the finding of fact of the Federal Trade Commission and the function of the courts in reviewing such a finding, the question whether the act was merely declaratory of the old law of unfair competition or amendatory, and the like—we come to a set of business questions that the court could not entirely avoid. The Supreme Court recognized this ultimate criterion in several parts of the opinion. Thus it said the words were clearly inapplicable to practices never *heretofore* regarded as opposed to good morals. It spoke of a man's right to exercise *reasonable* discretion with respect to his own business methods. On this basis it concluded that the practice complained of was not "unfair." The old recognized practices that appeared reasonable were not unfair. Accordingly the court spoke of the "long recognized" right of a trader engaged in an entirely private business "freely to exercise his own independent discretion as to the parties with whom he will deal." All this was subject to the limitation that "a different case would, of course, be presented if the Raymond Company had combined and agreed with other wholesale dealers that none would trade with any manufacturer who sold" to competitors or to retailers.

The reiteration in 1924 of the right of the business man to refuse to deal with others "for reasons sufficient to himself" was of considerable

¹ Supreme Court of the United States. Argued November 27, 1923. Decided January 7, 1924. 44 Sup. Ct. 162.

importance to the business world. Ever since the Beech-Nut case² (1922) there had been some doubt as to whether a plan that could not lawfully be carried out by contract could be given support by refusal to deal with those who refused to act in accordance with the plan. The business man did not overlook, even if the court did, that in the case before us the wholesaler sought to eliminate competition between the manufacturer and himself, and would gladly have signed a contract to that effect if the law had enabled him to do so. Furthermore, the power of an important wholesaler to align manufacturers, by his threat, in a combination to do his bidding is not inherently different from the power of a manufacturer to reduce competition among the distributors of his product, as described in the Beech-Nut case. In this case the court ignored the question whether competition with one's own customers was within the scope of the act; whether the purpose of the threat was to maintain the status quo in an industry or to remove competition theretofore existing; and whether the relative strength of manufacturers, wholesalers, and dealers in a particular industry placed the practice and threat in this case in the light of defensive weapons against oppression or of offensive weapons calculated unduly to limit competition or create a monopoly. It simply decided what is, of course, true as a general proposition, that in the absence of the monopolistic element or danger to competition the refusal of a single dealer to buy from another is not unlawful.

May, 1926

N. I.

² *Federal Trade Commission v. Beech-Nut Packing Company*, 257 U. S. 441.

85. BELMAN DEPARTMENT STORE¹ I H.B.R. 314

COMMENTARY: The Belman Department Store case raises the question of purchasing foreign-produced goods through import merchants in New York, or of buying from foreign merchants or producers through a foreign commissionaire.

Although the company's experience had not been satisfactory with the commissionaire method, it must be remembered that the period from 1921 to 1924 was one of unsettled economic conditions in the Far East and, in the case of Japan, was made especially severe by the great earthquake of 1923. The unfavorable experience with the commissionaire during this period undoubtedly was due in part to those factors. The wisdom of the Belman Department Store's change of buying methods in 1921 may well be questioned in view of the fact that economic and commercial conditions were then in a state of post-

¹ Fictitious name used for purpose of disguise.

war readjustment and it was not an opportune time to make a change in major policy not imperatively demanded. Reconsideration of the earlier decision to use the commissionaire was therefore desirable in 1924.

Commissionaire buying had become, before the war, a common method used by department stores in purchasing in European markets. In spite of certain disadvantages, it had generally been satisfactory. It effected financial savings to the stores; it gave the stores permanent representation in Europe; it enabled the stores' buyers on their trips to Europe better to utilize their time; it gave the smaller stores many of the advantages of direct buying that otherwise would have been impossible.

It does not follow, however, that because commissionaire buying was generally a satisfactory method in Europe it would be satisfactory in the Far East. The conditions affecting department store purchasing in the Orient were in many respects, as instanced below, different from those in Europe.

1. The volume of department store purchases in the Far East was relatively insignificant as compared with purchases of department stores in Europe, and even this volume was to a large extent a result of the war and likely to be only temporary. With Europe's recovery, much of the department store buying from Japan, developed under war-time necessity, would be expected to decline.

2. The Far Eastern purchases were of a character different from the bulk of purchases in Europe. They consisted less of staple and style goods and more of novelties and curios. Furthermore, for many products the Far East was a new source and there was consequently much uncertainty as to quality of goods that would be delivered as well as to satisfaction in packing and deliveries.

3. The European market was concentrated in a relatively small area in Central and Northwestern Europe while the Far Eastern market was scattered in widely separated centers in Japan, China, the Philippines, and India.

4. The foreign trade of Far Eastern markets was largely organized on the basis of the import and export merchant. Manufacturers had relatively little experience in dealing directly with foreign purchasers, as also had Far Eastern commissionaires. Europe, however, through long development and experience, is a highly organized market, and its manufacturers, merchants, and commissionaires were accustomed to meeting the requirements of American department stores in selection of merchandise, in methods of packing, and in deliveries.

5. Europe is but a few days' distance from the American market.

The Far East, however, is several weeks away, requiring much longer time for delivery and necessitating the tying up of capital by the department store when purchases are made direct.

The differences enumerated above are of the kind that in general favor the use of the import merchant in supplying the retail merchant with foreign goods. Successful import merchants are specialists in commodities and in markets. The more distinct, the more scattered, the less organized the markets, and the more technical the skill required in handling the merchandise, the more useful is the merchant. One of the functions of the merchants also is to carry the financial burden of importing and to assume some of the merchandising and financial risks. Under existing commercial conditions in the Far East, the import merchant is in a position to perform these valuable and necessary services for American purchasers of Far Eastern products.

In view of the general considerations outlined above, as well as because of the specific situation as given in the Belman Department Store case, it is believed that the store's decision in 1924 to reestablish connections with New York importers of Far Eastern products was a sound one.

March, 1926

G. B. R.

86. HOSMER ELECTRIC MACHINE COMPANY¹ I H.B.R. 317

COMMENTARY: Is the manufacturer of a specific product justified in promoting sales of that product in a foreign country by providing collateral service essential to the satisfactory use of the product?

The company in this case manufactured a small electric indoor truck which it was unable to sell successfully in Mexico City, because of the insufficient facilities for recharging the storage batteries which furnished the trucks' motive power. In order to meet this need and to make it possible to sell the small trucks, the company secured the agency for a storage battery and for a large electric commercial truck, and opened a battery store and service station in Mexico City.

Cases of this sort suggest those grouped under the head of *Ultra Vires* in the law. A company may not undertake legally any operations not contemplated in its charter of incorporation. Here, of course, the question is not whether a company legally may take certain steps, but whether such steps are justified as a matter of business policy. But there is a strong similarity. For the legal doctrine itself there is a sound business foundation which its exponents doubtless have had in mind in proclaiming that it was unwise for a company to dabble in

¹ Fictitious name used for purpose of disguise.

matters for which it was not incorporated. And it is recognized in the law that a company may conduct operations collateral to or reasonably incidental to the fulfilment of its established purpose.

Automobile manufacturers have recognized for a long time the desirability of providing adequate service for their cars after sale. Thus, the General Motors Export Company maintains service stations of its own in its most important foreign markets and arranges for satisfactory service in others. Manufacturers of heavy machinery, such as textile machinery, are accustomed to provide sales engineers, whose function is to travel the territories in which the company's machines are installed and to insure satisfactory service to customers.²

The present case goes beyond most such instances, however, in that the manufacturer's aim was not so much to provide service for the truck itself as for the independent unit which furnished its motive power. Furthermore, the company not only provided service, but took on an agency for allied lines, the sale of which was expected to (and did) cover the cost of providing such service. All this seems unquestionably sound, except possibly the acquisition of the large truck agency, the reason for which does not seem wholly clear on the facts given.

If a study or, as in this instance, an estimate, of a foreign territory indicates a potential market for a manufacturer's product, and shows also that certain facilities must be present before that market can be developed, the manufacturer surely, as a matter of sales promotion, may endeavor to provide those facilities. Whether or not the effort is justified in a particular case must depend on whether estimates of potential sales warrant the expenditure required for such sales promotion or whether, as in the present case, the cost of such promotion can be met either from the proceeds of the promotion itself or from the sale of collateral lines undertaken in connection with it. Presumably, the test in any case would be along some such lines.

March, 1926

P. W. T.

² See Arnold Machine Company, 1 H.B.R. 434.

87. BENDIX PHONOGRAPH COMPANY¹ 1 H.B.R. 320

COMMENTARY: The company in this case was faced by a depression in most of its existing markets, and in order to dispose of surplus production decided to extend sales to Australia, which offered attractive possibilities. If the venture proved successful, the company intended

¹ Fictitious name used for purpose of disguise.

to stay in the Australian market and to increase production if necessary.

This is a common reason for entering a foreign market. Instances are frequent where a company's attention is first directed to foreign markets because of temporary inactivity at home. Such a procedure is a backhanded way of establishing the principle that the company with the widest distribution of its products is best equipped to meet depressed conditions in parts of its territory. The sound view is not, as in this case, to turn feverishly to foreign markets in times of need but, regarding the world as one extended market, to cultivate potential territories so evenly that depressions in certain parts may be balanced by sales in others.

It is noteworthy that having decided to enter the Australian market, the Bendix Phonograph Company elected to make sales through an exclusive wholesale distributor. This distributor was well established, of a type to insure reasonably aggressive selling, and in a position to secure suitable local agents throughout Australia.

The other alternatives were to sell through export commission firms in the United States or to establish the company's own organization in Australia. The company wisely decided against the use of the former. The weakness of the export commission house is its inability, owing to the multiplicity of lines carried and the singleness of its organization, to apply proper merchandising methods, or even intensive sales effort of any kind, in certain individual cases. The company's products required energetic sales cooperation and a high degree of care in the selection of distributors, the very requirements that could not be met by an export commission house.

Ordinarily with specialty goods of this kind sound merchandising would dictate the sale to selected retailers, either direct or through the company's own branches, and possibly with the aid of the company's own salesmen, in order to insure proper sales effort.² In this case doubt as to the exact potentialities of the Australian market precluded such a step, and, pending development, the wholesaler fitly could be expected to occupy the place that otherwise would be occupied by the company's own branch or representative in the selection and stimulation of retail agents.

April, 1926

P. W. T.

² See Devon Phonograph Company, 1 H.B.R. 303; commentary, 2 H.B.R. 484; and Clarion Phonograph Company, 1 H.B.R. 54; commentary, 2 H.B.R. 390.

88. AMERICAN CALCULATOR COMPANY¹ I H.B.R. 323

COMMENTARY: This case is significant because it is an excellent example of the extension of domestic marketing principles to the foreign field. The company manufactured calculating machines which were sold to the best advantage in the United States by permitting free trial to prospective users. Although it does not appear from the facts given, it is a fair assumption that such a procedure was facilitated in the United States by the operation of the company through its own branches in the principal American distributing centers. These branches could sell direct to consumers, as is usually the case with accessory equipment of this type.

With the development of export sales, the company established its own branch in London. Branches could not be supported elsewhere, and in other foreign markets the company cultivated sales through exclusive retail distributors. The problem of free trial was accordingly a difficult one. Distributors were unwilling to tie up the funds necessary to carry the heavy inventories required for trial purposes. The obvious solution was to ship to distributors on consignment, a procedure which would increase the company's investment by deferring payment on foreign shipments, but which was entirely consistent with the company's domestic policy, where an analogous situation presumably existed in the stocks carried at the company's branches.

The company accepted the consignment idea but restricted it to points where adequate supervision could be exercised. This was a wise limitation. The laws of different countries vary widely on the subject of consignment sales and, although it is possible in most jurisdictions to draft consignment agreements in the form of conditional sale contracts or otherwise so that they are legally secure, there is often little real protection against a dishonest consignee. In Peru or in the Argentine, for instance, if a consignee sells consigned merchandise on credit and defaults before the expiration of the credit term, the consignor has no redress against the vendee.²

The noteworthy feature of the case is the acceptance of the principle of free trial in foreign sales, although selling methods had to be varied in order to make the principle effective. Too many manufacturers tend to regard foreign trade as a mysterious province, and it is salutary thus to find a case which recognizes the general applicability of the principles underlying sound merchandising.

April, 1926

P. W. T.

¹ Fictitious name used for purpose of disguise.

² Argentine Commercial Code, Section 233.

89. LAMBERTI GROCERY COMPANY¹ I H.B.R. 325

COMMENTARY: The problem faced by the Lamberti Grocery Company was to decide to what extent direct control of production in a foreign country should be undertaken by an importing wholesaler in order to insure a uniform high quality of product. In general, a merchandising company should exercise great caution in undertaking the functions of production. This is a fact even in domestic trade, but in a distant foreign land the reasons for hesitation are even more pronounced. The experience and personnel of a merchandising organization usually do not qualify it for manufacturing. In the case of a foreign factory, control from the home office is difficult, and it is even more difficult to secure and send out competent managers to a foreign plant, where industrial conditions are likely to differ widely from those with which an American manager is familiar.

In the case under consideration, however, the conditions seem to have favored the company's decision to establish a plant in Rome. In the first place, the manufacturing process was a simple one requiring but few laborers, and these readily obtainable. In fact, the "manufacturing" process might better be described as a "preparation" of the product. The investment required was small, and both the financial risk and the manufacturing risk apparently were slight.

Second, the control of quality of the final product seems to have depended more upon the crude or uncured cheese than upon the curing or manufacturing process itself. Hence, the decision to establish the plant was influenced largely by the need of careful selection of the crude product at its source. That is, the establishment of the curing plant was made desirable because of the need of purchase control of the raw material. Third, the number of shepherds producing was small and they were found in an area limited in extent and near to Rome, where the company already had a branch buying office incorporated as an Italian company. The problem of collection was, therefore, simple; only slight expansion of the existing personnel was necessary; and no change in the type of company organization in Italy was required.

In the fourth place, the product was sold in the United States as a branded product of highest quality. Wholesale grocers are accustomed to the processes of repacking and performing other simple preparations on products imported for resale under trade names. For example, imported teas frequently are blended and packed by the grocers; coffees are roasted and blended; olives and dried fruits are selected and repacked; and so on. These processes, it is true, usually are performed

¹ Fictitious name used for purpose of disguise.

in this country, the crude material being imported. In the case of the Italian cheese, it is evident that if similar control of the grade and quality was to be maintained, it would have to be done in the country of production, since the crude cheese as obtained from the shepherds was perishable and had to be salted and cured at or near the source of production. The need of performing the manufacturing or processing operation was the same as for tea or coffee; the nature of the product, however, required the location of the processing plant in a foreign country.

The possible saving to be made in the salter's profits, though an important consideration if it could be effected, was not the chief consideration to be kept in mind in reaching the decision in this case.

The decision of the company, therefore, appears to have been a sound one, since this is a case where the maintenance of a uniform high quality of branded merchandise necessitated the maintenance of strict control in the purchase of the crude material; this control in turn required that certain manufacturing processes be undertaken. Since the crude material was perishable and thus incapable of importation in the crude form, the processing plant had to be located in the country of production.

October, 1925

G. B. R.

90. RADWAY TALKING MACHINE COMPANY¹ I H.B.R. 328

COMMENTARY: The establishment of a branch factory for manufacturing a quality product in a foreign country is attended with many risks in the maintenance of quality, especially if the factory is in a non-industrial community such as Argentina. Adequate management in such a country is usually secured with difficulty and it is usually exceedingly difficult to obtain American managers who will permanently reside abroad. But even if the management is adequate, maintenance of quality of product under new labor and industrial conditions in a country far removed from headquarters is problematical.

For the Radway Talking Machine Company, however, there were factors that weakened the force of the general rule. The proposed factory was more nearly an assembly plant than an actual factory, except for the making of the cabinets; and the proposal for the factory was stated to be closely connected with the change in sales methods about to be introduced. For a bulky product like phonograph cabinets, material savings could be made in transportation costs if the cabinets were locally produced. Furthermore, the making of cabinets was a

¹ Fictitious name used for purpose of disguise.

relatively simple manufacturing operation requiring little power, and cabinet workers were perhaps more likely to be available in a large non-industrial city like Buenos Aires than many other types of skilled laborers. While not mentioned in the case as a possibility, it would seem that even the cabinets could be shipped "knocked down," leaving only assembly and polishing for the Argentine plant.

As indicated, the question of establishing an assembly plant or factory by the Radway Talking Machine Company was closely related to the change in sales methods already decided upon; that is, the company would undertake direct distribution through its own sales branch in Buenos Aires rather than through a New York export house. Since this kind of distribution would make necessary warehouse facilities, space for manufacturing would be available at little or no extra expense. Furthermore, since repairs and other services would be necessarily performed by a branch house, a factory would facilitate and enlarge the ability to perform such services and to that extent aid sales.

In spite of these considerations, the limitations and problems connected with the operation of a factory in Argentina made the feasibility of the establishment of a branch factory doubtful. With a storage warehouse, quick deliveries could be made irrespective of the factory. Furthermore, deliveries could be made from the New York warehouse in less than three weeks as a result of the recent development of steamship services. The question of quick deliveries, therefore, did not seem to be involved in the decision to establish a factory. The uncertainty of maintaining quality in the locally made cabinets was an important factor against local production. Still more important was the uncertainty of obtaining a manager with the combined ability of a factory manager, a salesman, and a credit man, such as is called for in the statement of the problem. The fact that the branch factory was established in connection with the change to direct sales and has apparently been successful is to be attributed to the good fortune of the company in securing an unusually competent Argentine manager. The decision in this case apparently rested largely on the fact that such a competent manager was available. Ordinarily the manufacture of a quality product can hardly be transferred with safety to an industrially new and undeveloped community and quality be maintained at a cost that would make the transfer profitable.²

October, 1925

G. B. R.

² See also Lamberti Grocery Company, 1 H.B.R. 325; commentary, 2 H.B.R. 494.

91. WESTERLY MOLASSES COMPANY¹ I H.B.R. 331

COMMENTARY: The case of the Westerly Molasses Company resolves itself into a series of problems: first, should the sale of molasses exclusively in barrels have been abandoned; second, if so, what new sizes of containers were to be chosen; third, should the manufacturer's brand have been used; lastly, what methods should have been used to introduce the brands adopted and the new containers?

The abandonment of sales exclusively in barrels offered certain advantages, particularly those of convenience to the buyer and to the dealer, and of the identification of the product. The packaging of products as difficult to handle as molasses is in line with important developments which have played a great part both in general distribution and in the selling of food-stuffs during the last generation. To the retail consumer there is the convenience of not being required to furnish a container or to return a borrowed one; to the dealer there is advantage both in display and in handling. Against this convenience is to be placed the extra expense of the container, the present and future selling value of which is to be appraised with due regard to growing objection to expensive containers and to their cost, especially for staple products. The packaging also furnishes a means for preserving the identity of the manufacturer in the sale to consumers. Negatively, it protects him against substitution, and against the ill will which may result from the substitution of an inferior product.

The size of container should be determined with reference to buyers' habits and buyers' convenience. The containers chosen should include a size sufficiently small to meet the desires of the very large group of small purchasers; likewise there should be larger units to satisfy the needs both of larger users and of those who prefer to purchase in larger quantities because of the relative economy. Since ordinarily containers for larger quantities are relatively cheaper than those for smaller quantities, a price differential frequently may be quoted which will be an incentive to the purchase of larger amounts, with resulting economy of sales and other effort. On the other hand, the number of sizes of containers should be as small as is consistent with meeting the bulk of demand. The plan here adopted of choosing only those sizes which were most commonly sold is, therefore, a sound one. The multiplication of sizes of containers increases costs, sometimes through increase in container costs, through increase in stocks to be carried and in interest and storage charges, and through increase in clerical work.

Molasses is a staple product, frequently sold under private brands

¹ Fictitious name used for purpose of disguise.

of jobbers. The quality is not easily ascertainable by the consumer in advance of purchase. There is, therefore, reason for favoring the proposal to use the manufacturer's brand so as to assure to him the benefit of repeat demand arising from high quality of product. The use of manufacturers' brands also makes it possible to employ advertising as a means of sale in conjunction with personal salesmanship.

May, 1926

H. R. T.

92. OAK CHEMICAL COMPANY¹ I H.B.R. 335

COMMENTARY: The decision arrived at in this case is sound. The question of accounting for returnable containers is one of those which are likely to have little practical significance during uneventful business periods; but as soon as abnormal conditions arise, either of boom or of crisis, the question is apt immediately to entail urgent financial considerations. If prices of containers should rise sharply, consignees would retain large numbers of them, and the shipping company would be under obligation to purchase quantities of new barrels at the enhanced prices. If, on the other hand, depression and falling prices set in, consignees would return every barrel for the purpose of recovering the cash value, and the shipper then would have to meet a real liability of substantial amount.

In these conditions trade associations of businesses which handle returnable containers urge their members to make due provision for this liability on their books, by crediting that portion of their billings which covers containers to a liability account, rather than to a revenue account. This liability account would preferably be called "Liability on Returnable Containers," rather than simply "Returnable Containers"; the latter suggests an asset title.

In this case, several important points would arise in handling the matter, namely:

1. The inventory of barrels might be kept straight by debiting an account, "Tight Barrels Returnable from Customers," and crediting "Tight Barrels" with the cost of all barrels shipped out. Barrels owned would then be in two accounts, one recording the cost value of those actually in hand, and the other recording the cost value of those in the hands of consignees.

2. Provision must be made to record all returns properly. "Liability on Returnable Containers" would be debited, and "Accounts Receivable" (or "Cash") credited, with the value as charged out to the con-

¹ Fictitious name used for purpose of disguise.

signee. Simultaneously "Tight Barrels" would be debited, and "Tight Barrels Returnable from Customers" credited, with the cost value of barrels returned, thus restoring the inventories.

3. One of the most difficult points would be to estimate, from time to time, the quantity of barrels then charged to customers, which would never be returned. Barrels should not be written off until it was practically certain they would not be returned. Then the charging-out value of barrels to be written off would be debited to "Liability on Returnable Containers," the cost price of them credited to "Tight Barrels Returnable from Customers," and the difference, or profit, credited to "Profit and Loss."

4. Another complication would arise from the fact that barrels were depreciated on the basis of a life of four trips per barrel. Does this mean that the charges to customers were less for old barrels than for new? If this were the case, corresponding adjustments would be necessary throughout the records. In any case, when barrels were written off because it was not expected that they would be returned, such portion of the reserve for depreciation as applied on them would have to be debited to the reserve account and credited to "Profit and Loss."

February, 1926

T. H. S.

93. SAGAMORE HARDWARE COMPANY¹ I H.B.R. 336

COMMENTARY: In deciding whether to adopt the decimal system of packaging and packing its hardware products, the Sagamore Hardware Company balanced the costs and difficulties of the change against the anticipated advantages. The advantages were chiefly in the relative economy and convenience of making decimal calculations as contrasted with those made on the basis of dozens or gross. That such economy and convenience would be secured admits of no doubt. The practical utility of weights and measures based upon the decimal system has been amply demonstrated.

Nevertheless, the proposed decimal system involved a change in the buying habits of many retailers and wholesalers. The preference of some of these purchasers for the old methods undoubtedly would continue. Though the substitution of tens or hundreds would have the result of temporarily reducing the amount shipped on orders given in dozens or gross, that loss should be more than compensated for by the additional convenience which was expected to be recognized by the more progressive merchants. It was probable, furthermore, that the cost of making the change, while considerable, would be offset within

¹ Fictitious name used for purpose of disguise.

no great length of time by the economies which would be secured in office practice, and by the greater accuracy which would be attained.

In packing, however, there is a practical objection to the decimal system, because for many products dozens or gross can be packed more economically than tens or hundreds. A company whose products were largely in regular shapes might well find that tens or hundreds would not pack well, that is, without waste space in the containers.

The decision of the Sagamore Hardware Company to make the change seems to have been correct. The cost was not excessive; there was no consumer preference for the old packaging and pricing plan; advantages were to be gained by middlemen by the change; and manufacturing processes were not affected. The further fact that in hardware a large proportion of the products are of irregular shape tended to reduce the disadvantages of the proposed plan. It appears, therefore, that the economy and convenience to all parties interested were greater than the costs in money and in difficulty of changing existing habits.

May, 1926

H. R. T.

94. HUNT INSULATED WIRE COMPANY¹ I H.B.R. 339

COMMENTARY: The significance of this case lies in its illustration of the use of mail as a quick and direct means of getting workable samples of a product into the hands of prospective customers.

Since the new wire was not patentable and was subject to imitation, the objective of the company's introductory advertising campaign was threefold: (1) to educate consumers concerning the qualities of the new rubber-sheathed wire; (2) quickly to get selected prospects to try the wire as an aid to further sales to them and to other consumers; (3) to stimulate the company's own sales organization and wholesalers' organizations to push the sale of the product.

The experience of the company seems to justify its strategy in using a workable sample of the cord. Its experience also indicates the value of mail as a medium for making a direct approach to selected prospects with a definite offer in order to secure immediate response. In the use of direct mail it is to be noted that the company provided for prompt treatment of replies, for coordination between its own direct mail efforts and the personal selling efforts of its field organization and of its distributors, and for a definite follow-up both with letters and personal visits.

Thus it is seen that the method outlined in the case was suitable as a means of getting workable samples quickly into the hands of pros-

¹ Fictitious name used for purpose of disguise.

pective users, and of giving these individuals information about the new product. It was probably helpful in stimulating wholesalers to promote the sale of the product.

Analysis of this case, however, indicates that the use of trade and industrial papers simultaneously with the direct mail efforts would have been advisable. Since the product was one that was likely to be copied sooner or later, the company should have attempted to build up as early as possible a definite association of the peculiar qualities and merits of the product with the trade name. The product was new and individual and had superior qualities desired by the consumer. In order definitely to associate these qualities with the brand name, the company would have been justified in making a large initial expenditure in an attempt to establish a leadership for this type of wire and thus make the entry of imitators into the field more difficult.

May, 1926

N. H. B.

95. SHAWNEE POLISH COMPANY¹ I H.B.R. 342

COMMENTARY: The Shawnee Polish Company was in position to adopt one or a combination of four methods of apportioning its advertising, three of which are mentioned in the case. First, it might advertise steadily and evenly throughout the year, a policy in accordance with many teachings upon the necessity for steadiness and repetition as a means of making an impression upon the public to which the advertising is directed. As yet, however, data are inadequate upon which to base positive statements concerning the relative advisability of a steady and even flow of advertising as compared to alternating small and large advertisements or carrying on intensive campaigns at intervals.

In the second place, the proposal to advertise in the spring at the height of the buying season for stove polish concentrated this form of sales effort in a period when it seemed to be least needed. It would seem preferable to have advertised in advance of the season, because it takes some time for a campaign to become effective.

The third proposal, to advertise during the slack season of the year as a means of increasing sales in those months, was inadvisable for two reasons: first, because the full effect of such advertising would not be secured during those months; and second, because the small buying at such seasons might be based upon a real seasonal buying habit which the company could not change.

The last method, that the Shawnee Polish Company advertise inten-

¹ Fictitious name used for purpose of disguise.

sively for periods in such relationship to the buying seasons that the full effect of the campaign might be secured, alternating with smaller advertising or no advertising between more intensive campaigns, offered possibilities which should have been investigated by the company. Certain investigations in connection with periodical advertising have been made which seem to indicate that with a given advertising expenditure, the use of large space for a period, followed by an interruption or mere reminder space, the whole schedule to be repeated several months later, yields total results greater than those yielded by the use of space spread equally over the year. If such apportionment of advertising has merit, and if the seasonal purchase of polish is not susceptible of change with reasonable effort, it would seem advisable for the Shawnee Polish Company to have concentrated a suitable proportion of its campaign at such times as would enable it to reach the bulk of its buying public immediately in advance of, and during the early part of, the consumer buying seasons.

The success of the plan adopted indicates that the addition of advertising constituted an improvement in the quality of the company's total sales efforts; in other words, that its sales plan was better balanced than without advertising. It does not prove that the particular plan of scheduling advertising was the best.

May, 1926

H. R. T.

96. ROARK SAW WORKS¹ I H.B.R. 345

COMMENTARY: This case involves three questions: (1) decentralization of control of sales force; (2) decentralization of control of stocks; and (3) decentralization of control of credit. When the company established sales branches, that decision necessarily carried with it a correlated decision to place the salesmen under the supervision of the branch managers; otherwise the branches would have been merely stock depots and would not have achieved the company's major objects in sales promotion.

On the question of the control of stocks of merchandise to be carried in the branches, the wisdom of the company's decision to have the selection of stock made by the branch managers is not so clear. It is obvious, of course, that the opinions of the branch managers regarding branch stock requirements should have been weighed carefully. Their familiarity with local needs demanded that. It is almost inevitable, however, that a branch sales manager, when given an entirely free rein, will seek to have large enough stocks on hand, if possible, to meet al-

¹ Fictitious name used for purpose of disguise.

most any contingency; he desires to guard against loss of sales because of inability to make immediate delivery. The result is that he tends to overestimate probable requirements and thus to accumulate an excessive inventory. The Roark Saw Works, apparently, did not provide for adequate control of branch stocks by the home office.

In providing for the decentralized control of credit, the governing factor was the provision for making prompt deliveries. To be able to deliver goods promptly was one of the chief reasons for establishing the sales branches. If prompt deliveries were to be made, it was essential that the branch managers should be permitted to decide on the amount of credit to be granted to each customer from whom an order was received. Had a branch manager been compelled to refer each order to the credit department at the home office, the delay in acceptance of the order would have nullified, in large part, the advantages of carrying stocks at the branches. It is true, of course, that this policy involved risk of too great liberality in granting credit in order to boost sales. The company was selling its products, however, to regular customers of known standing whose habits of payment were on record, and the risk of overextension of credit could be guarded against by the general regulations set up by the central credit department.

This case shows that when stocks of merchandise are carried at sales branches, in order that prompt deliveries to customers can be made, it is sound policy to decentralize the control of credits under general rules stipulated by the general credit manager.

October, 1925

M. T. C.

97. ALDRIDGE ADDING MACHINE COMPANY¹ I H.B.R. 348

COMMENTARY: The proposal to decentralize control of credits and collections is a part of the larger problem regarding the decentralization of sales branch operations.

"An examination of the relations of branch offices to sales headquarters discloses the existence of two opposing theories. First, not a few important and successful concerns hold that the branch is merely a field extension of the headquarters of the selling organization to be as strictly controlled and directed with as much detail as though it were a subordinate department in the home office. The manager is responsible only in a vague way for results, but very strictly for following detailed instructions and making detailed reports as to his actions. Branch managers are ordinarily very carefully controlled and closely restricted. It may be contended that the compliance with thought-out

¹ Fictitious name used for purpose of disguise.

instructions will for the average branch manager make for higher performance than if he is left to his own devices and to his own initiative. Furthermore, strict control implies that sales headquarters will have at all times accurate and detailed information as to the actions of branch organizations. Variations from expected results can be quickly perceived and, wherever necessary, remedial measures may be applied. There is, of course, much truth in the contention that it is easier to secure men who will work satisfactorily when carefully controlled than to secure men who can be depended upon to obtain results without detailed supervision. However, to exercise the necessary control may be costly, whether measured in terms of effort or in terms of red tape, delay, and general inflexibility of the branch organization. Too severe restriction will kill initiative and make it ordinarily possible to retain only those men who are lacking in this quality.

"Opposed to the policy of restriction is the theory that the sales branch is a separate territorial selling organization to be operated as nearly like an independent enterprise as possible. The branch manager is held fully responsible for results, which are measured by profits, and is given a wide latitude of action restricted only by the few broad general policies of the company necessary for carrying out its fundamental purposes. The chief advantage of such organization is that it attracts a superior type of manager with greater initiative, often resulting in increased sales and larger profits. The amount of control is reduced and expense likewise lessened, though on the other hand the compensation which must be given to such managers must be increased to correspond with their larger responsibilities. The difficulty of securing men of sufficient ability implies that greater risk attaches to this type of management than to a strictly controlled management. The incompetent or dishonest branch manager may cause very large losses before he can be checked."²

While a number of years ago the tendency in organization appeared to be toward centralization, the movement of reorganization today seems to be in the opposite direction. There are several plausible reasons for this tendency. First is the fact that in decentralized organization the limits of managerial ability are not reached so soon as with highly centralized organization. Second, the difficulty of securing the type of subordinates needed to prevent a large corporation from suffering from bureaucracy is aggravated by highly centralized organization. Men of the type desired, men who are able to make decisions, are not inclined to favor working under detailed supervision. Third, while initiative always will be needed, the increased knowledge concerning fundamentals of business renders the risk of decentralized organization somewhat less than in pioneer days. In the case under discussion, the decision indicates a willingness to try decentralization.

² Tosdal, H. R., "Operating Problems of Branch Sales Organizations," *Harvard Business Review*, October, 1923, Vol. II, No. 1, p. 74.

Provided there were reasonably competent branch managers and a policy of holding men responsible for profits and not merely for volume of sales, the decision appears to have been correct.

The need of promptness in decision upon credit matters favors decentralization. The establishment of a sales branch to serve customers and prospects in the territory by giving them prompt shipments and service, often depends for success upon the promptness with which each credit decision can be made. Obviously, slowness in making credit decisions which hold up shipment from the branch, tends to nullify some of the advantages which a firm expects to secure from a branch organization. Furthermore, the increasing number of accounts and of branches makes it constantly more difficult to secure prompt attention for credit matters in the home office on the part of responsible credit executives.

Also, the amount of sales to the average purchaser is relatively small; that fact reduces the risk. Furthermore, the branch manager, if made responsible for credits and collections, can watch current developments and will be much more likely to take necessary action to protect the company's interests than if he feels that the central credit department is solely responsible. With this greater responsibility it is necessary and also possible to secure a better grade of branch manager. Also, the branch which can pass upon credits as upon other decentralized functions, partakes more of the characteristics of independent stores and local stores and benefits accordingly.

The chief danger is the possibility of the exercise of poor judgment by the branch manager. Losses may be limited, however, by restricting the amount of credit to be extended to any one customer without reference to the home office. The plan of furnishing a list of approved customers is also a method of limiting losses, which might be applied in part in this situation. It seems logical also, since credit responsibility is placed upon the credit manager, that collections likewise be there located. While an argument exists against the practice of requiring branch managers and salesmen to collect, on the ground that it makes them too conservative in their sales efforts, it does not appear to have deciding weight in the analysis of this case.

May, 1926

H. R. T.

98. HAMPTON CALCULATING MACHINE COMPANY¹

I H.B.R. 350

COMMENTARY: To judge the performance and value of salesmen in terms of monetary profit and loss to the company was the evident

¹ Fictitious name used for purpose of disguise.

purpose of the branch manager of the Hampton Calculating Machine Company in proposing that branch overhead be allocated on the basis of quotas. The sales in each salesman's territory yielded gross earnings from which the salesmen and the branch manager had to secure their earnings after expenses were paid. The commissions to be paid to a salesman could be clearly allocated to him and deducted from the gross earnings of the territory. Some of the other expenses, including delivery charges upon shipments into the territory, and advertising material mailed into the territory at the request of the salesman, were clearly incurred for the purpose of developing business resulting in sales for the particular salesman.

The problem, however, arises when the indirect expense incurred in maintaining the branch and cooperating with the salesman comes up for division and allocation. Accounting practice ordinarily recommends a division based on the relative sales. The branch manager's statement that this method is theoretically incorrect is sound, at least where the purpose of allocation is that of determining the net earnings from each salesman's territory. Obviously, unless sales are made by each salesman exactly in proportion to what may be expected from the territory, and unless salesmen work equally hard and intelligently and effectively, good salesmen tend to be penalized by being charged with a larger proportion of the overhead than the salesmen with very poor records.

In this case, allocation of overhead on the basis of territorial sales quotas was advocated as a substitute for allocation on the basis of past sales. As pointed out in the case, the man who sold double his quota through hard work would not be penalized by having to bear double the amount of overhead. Likewise, the man who had neglected his task would be charged with the full indirect expense attributable to his territory. The plan obviously would make good men show up more favorably, poor men more poorly. The plan would save time, which is essential in managerial control; general expenses could be estimated with some degree of accuracy; quotas were prepared in advance. It would become possible, therefore, to allocate costs promptly at the close of each accounting period to each salesman or to the salesmen occupying the territory.

There are certain limitations of the method which render it unsuitable for use by most companies. The success and justice of the plan depend upon accuracy of quotas and discretion in the interpretation of the results. The allocation of branch overhead on the basis of branch quotas can be applied with success only when the quota is based upon territorial possibilities, and only when the quota is well within the limits of performance of salesmen of the type which the company cus-

tomarily employs. The "net value" of the salesman to the branch in terms of profit secured on the basis of competition, by methods outlined, must be used with caution, because the unprofitableness of the salesman on such a basis is purely in terms of immediate sales and immediate profits, and does not take into account the work which men are doing in building up a future market, nor does it take into account other factors of importance in judging salesmen. Tentatively, therefore, the use of such a device based on the allocation of overhead in proportion to quotas must be approved only from the view-point of the company which is in a position to set accurate quotas and whose executives perceive the limitations of the device. It is probably unwise to carry such allocation of overhead into the accounts until there is greater assurance than at present of the possibility of establishing sound budget quotas for many different types of industry.

May, 1926

H. R. T.

99. TINKHAM, LITTELL, INCORPORATED¹ I H.B.R. 352

COMMENTARY: The first and third plans tried by Tinkham, Littell, Incorporated, were inherently the same except that in the third plan provision was made for a better coordination of the production and sales departments of each of the seven groups of products. The case comes down, therefore, to a study of the relative merits of the second and third plans.

The third plan involved some duplication of sales effort; a portion of the company's customers would be visited by more than one sales representative of the company. Traveling expense is a large item and the second (Jamestown) plan appeared likely to make it possible for a salesman to secure a larger volume of sales per 100 miles traveled than could be secured by a salesman in a similar territory operating under the third plan.

One weakness in the second (Jamestown) plan lay in the organization plan whereby each branch manager was responsible to seven superior executives. Good results could not long be expected with such divided authority. Even had that weakness been removed, there was an unavoidable weakness in the plan, which arose out of the difficulties, if not the impossibilities, of training salesmen to make them thoroughly conversant with the technical qualities of seven unrelated lines of products and with the requirements of purchasers of those products. Although there was some overlapping of the classes of customers, the market for each line of products was largely confined to a

¹ Fictitious name used for purpose of disguise.

distinct class. For the kinds of goods which Tinkham, Littell, Incorporated, was manufacturing, purchasers expected the company's salesmen to be able to furnish technical advice as to the suitability of the products for particular purposes. Patronage was affected by the dependability and facility of that service. With such distinct classes of customers for the respective groups of products, a segregated sales organization, such as was provided in the third plan, was sounder than the consolidated plan of organization.

October, 1925

M. T. C.

100. HANDEL FOOD PRODUCTS COMPANY¹ I H.B.R. 360

COMMENTARY: The unevenness in the sales of different classes of the company's products was due chiefly to the variation in the training, interests, and efforts of salesmen. A salesman sells the products he knows best to the buyers whose needs he understands most fully. Obviously, some means of developing the training of salesmen on the job is necessary; that can best be accomplished by personal contact and supervision. In this case, district supervisors apparently were not in position to furnish this continuous training and cooperation.

The proposed plan furnished four specialists, a part of whose time would be devoted to the training of salesmen in the specialists' particular groups of products. The continuous study of their products and of methods and ideas for selling their products should make these specialists especially suited to the task of keeping salesmen up to date, of filling certain gaps in their information, and of helping to remedy certain deficiencies in equipment. While the responsibility of these specialists for the volume of sales of their particular product would make them work harder, the plan involved the danger of imposing too great pressure upon salesmen. In so far as the specialists pressed the salesmen for results, in so far as the requests and methods of the various specialists were incompatible or inconsistent, the plan would lead to friction and to dissatisfaction both of the salesmen and the district managers.

It cannot be stated definitely that the company's decision to hire the specialists was more correct than other solutions. It is true that the plan as adopted was temporarily successful, a fact which indicates that there was a certain amount of needed work to be done in ascertaining the wants of various classes of consumers and the availability of Handel products to satisfy those wants. Furthermore, it indicates that the specialists must have been men who could work satis-

¹ Fictitious name used for purpose of disguise.

factorily in cooperation with the other men in the field, some of whom were coordinate in authority. If care had not been taken in the selection of these specialists, there would have been undue pressure upon salesmen, and the destruction of morale of district managers and of salesmen. The success of this plan is one of numerous instances in which an organization is successful in spite of the violation of an accepted general rule of organization—that management is most effective, other things being equal, when a subordinate receives orders from a single superior officer, and is responsible to him alone.

May, 1926

H. R. T.

101. DRYDEN GAUZE COMPANY¹ I H.B.R. 363

COMMENTARY: When manufacturers produce articles which are sold to widely divergent markets, or produce several groups of products which require different types of knowledge and experience, the difficulty of recruiting salesmen who can satisfactorily both sell the different products and sell them to different markets is greatly increased. There is frequently, therefore, the tendency to consider the division of the sales force, whereby a salesman specializes either in the market to which he is to sell or in the class of goods he will offer.

In the case of the Dryden Gauze Company there were no differences in the types of goods which would render it difficult or impossible for the salesman to acquire and maintain the knowledge of the product necessary for satisfactory selling. However, there were very considerable differences in the points of view, needs, and attitudes of the classes of buyers for the product. Hospitals and institutions comprise a large consumers' market. The bunting and cheesecloth were sold to middlemen and to purchasers who bought for resale, not for consumption. The differences between the two classes of buyers were not so great as to warrant hiring and maintaining two groups of salesmen, with the consequence of greatly increased cost. More salesmen would have been required if a division of the sales force between hospital and dry-goods had been attempted, because the number of calls which could be made in the working time of the salesmen would have been considerably reduced. The traveling expenses of salesmen, furthermore, would have been increased and costs of supervision likewise.

Nevertheless, because some means for maintaining and improving sales effort to wholesalers and retailers was necessary, the proposal to establish a division manager in the home office for each of the two markets offered possibilities which justify the company's decision. Con-

¹ Fictitious name used for purpose of disguise.

tinuous training of salesmen on the job and cooperation with the salesmen to aid them in understanding the selling methods suited to the differences in attitude of different classes of dry-goods buyers were of such importance as to furnish for the new division managers tasks which in their results would warrant the additional expense.

May, 1926

H. R. T.

102. OBERFIELD SHOE COMPANY¹ I H.B.R. 365

COMMENTARY: The starting point for the development of any system for control of the sales force is the determination of the purposes of that control and of the most economical and effective means of attaining it. The purpose of the Oberfield Shoe Company executives was that of obtaining information which would enable the sales department to know whether or not salesmen visited prospects or customers at proper intervals, and the extent to which results secured from territories corresponded to their possibilities, so that sales executives might better direct the work of the salesmen.

Any plan to be adopted should conform to certain requirements. First, the plan should secure the information which will be needed and will be used by executives at branches or sales headquarters; second, that information should be secured in the most economical way, which implies:

1. That information which can be secured by clerical labor in the home office should be so secured;
2. That the reports required from the salesmen should be so designed as to involve the minimum expenditure of time and energy on the part of the salesmen consistent with procuring the needed information;
3. That salesmen be made to understand the necessity and the advantage of procuring such information and of making accurate reports.

The system placed before the Oberfield Shoe Company was not a complex one, although it aimed to furnish the desired information according to territories, salesmen, and customers. That information made it possible to determine whether prospects had been neglected, and whether customers were continuing to buy satisfactorily or not. Also the sales yield of particular territories and the performance of the salesmen by periods and by territories could be computed. The plan did not provide a basis for judging the yield of territories except by

¹ Fictitious name used for purpose of disguise,

reference to the yield of other territories or of several salesmen in the same territory.

Of the various features of the plan, the town record would be the most cumbersome. It would require several thousand cards.² A record of this size would be somewhat unwieldy from the view-point of furnishing the sales executives a perspective of the development of territories including many smaller places. It would seem that the use of cards only for towns in which customers or live prospects were located, in combination with some other more easily handled summary of facts concerning towns in which the Oberfield Shoe Company did not do business, would have been preferable. Furthermore, should the company have decided that its sales were to be concentrated in certain areas, it would have been unnecessary to keep records except for towns in the chosen areas.

It will be noticed that the salesman's obligations did not extend beyond the preparation of brief prospective customer cards and a report upon the prospect and customer cards which were to be sent him in advance of his calls by the company. To the salesman, therefore, the plan cannot be said to have been burdensome.

May, 1926

H. R. T.

² According to the 1920 Census figures, there were 2,787 places with 2,500 or more inhabitants each, and 12,905 unincorporated places with less than 2,500 inhabitants each.

103. MOISSON SHOE COMPANY¹ I H.B.R. 370

COMMENTARY: The Moisson Shoe Company's experience in the depression of 1920-1921 was not unusual. In spite of the incentive attributed to commission plans of compensation, many firms find that the straight commission, or a commission plan with a fixed minimum income, does not yield expected results in such difficult periods. Frequently such failure is not due so much to the plan of compensation as to the attempt to make a compensation plan a substitute for effective management by the executive or for intelligence and industry on the part of the salesman himself.

The plan which the Moisson Shoe Company proposed in order to meet the difficulties confronting it was a simple one of setting sales quotas on the basis of past experience, adjusted roughly to anticipated conditions. For purposes of control, the record of each salesman with reference to the quota set was to be made known to him at intervals during the selling season. The plan obviously possessed the merit of

¹ Fictitious name used for purpose of disguise.

any quota plan in that it set for each member of the sales force a fairly definite task. It recognized the fact that for a large majority of men the setting of a definite task is desirable. But whether a task is set or not, the sales manager is compelled to pass judgment on the salesman's work. Sometimes he is compelled to pass judgment on the basis of very inadequate information, judging present performance by past performance, or by his notions as to what the salesman should do. At other times, he passes judgment on the basis of extensive and very definite information. The fixing of a task in the form of a quota, therefore, is both planning and furnishing a basis for judgment or control.

The plan proposed by the Moisson Shoe Company is not to be regarded as important in itself. The system of making quotas and of informing the men of their ranks will be regarded by many executives as crude and unfinished. But the plan is to be judged by reference to the practice in the trade and by reference to previous practice of the Moisson Shoe Company. On such a basis, the plan of fixing a task for salesmen and of maintaining a record and informing salesmen of the extent to which they perform that task, is to be commended.

The difficulties which the company encountered were possibly due, in part, to the lack of care in establishing quotas. No quota plan will be fully successful unless the salesman is convinced of the fact that the sales quota really represents a task which the company expects to be performed and not merely some vague mark at which the salesman is expected to aim. Furthermore, the salesman must be convinced of the fairness of the task, both with reference to his own territory and with reference to the relative tasks of other salesmen. As salesmen become convinced that the sales executives are taking the quotas seriously, and that the tasks set are fair, it is to be expected that they will pay more attention and cooperate more fully with the management in accomplishing the task; the more so when they begin to realize that they are to be judged very largely, though not wholly, on the basis of the relationship of their sales to the quota.

May, 1926

H. R. T.

104. LANGDON CARD INDEX COMPANY¹ I H.B.R. 375

COMMENTARY: When a company in the position of the Langdon Card Index Company is confronted with the problem of increasing the compensation of its salesmen without increasing unit costs of selling or endangering its competitive position, a mere increase in salaries is not

¹ Fictitious name used for purpose of disguise.

usually sufficient to induce a corresponding increase in performance. It is frequently desirable, therefore, to make the connection between the increased compensation desired and the performance considerably more definite than the stated salary plan. This definiteness may be furnished either by direct variation of compensation according to the attainment of certain performance standards, quotas, sales of certain types of goods, and so forth, or by the establishment of definite tasks with an expressed or implied understanding that the relationship between compensation and performance of the task will be adjusted from time to time.

The Langdon Card Index Company's adoption of the quota seems to have been warranted by the advantage of setting definite tasks and the possibility in the industry of assigning tasks. Information was available as to past sales and as to the number of classes of prospects in various territories; likewise some information was available which would help in judging the business conditions of the period for which quotas were set. The establishment of an increase of very nearly $33\frac{1}{3}\%$ would have to be regulated, and distribution governed, by the extent to which territories had been worked in previous periods.

The decision of the executives in rejecting the use of ratings as a basis for bonus plans seems to have been justified. The plan for the rating of salesmen by the branch managers permitted of too great variations between branch managers' judgment of their own men, and permitted prejudice to enter into the rating of men by any one branch manager. As a result, a considerable proportion of the bonus would have depended upon the judgment of the branch manager regarding intangible factors. In this connection, it is noticed that for 16 of the 25 points allowed to "Efficiency," there was no objective basis for rating the men as to: (1) "quality of reports," (4 points); (2) "cooperation," (6 points); (3) "suggestions," (2 points); (4) "personality," (1 point); (5) "satisfactory sales service," (3 points). More than half the total points were dependent, therefore, upon the subjective ratings of the branch manager; in fact, only upon "number of calls," (4 points), and "new accounts secured," (5 points), could objective ratings be secured. In these, likewise, allowances would have to be made for differences in territories. As a consequence, the rating plan probably would have been unsatisfactory. While rating plans have their usefulness, their limitations are such that their utility in establishing a direct basis for the variation of the compensation of salesmen is seriously to be questioned.

The use of the gross margin as a basis for determining the bonus was open to the objections stated in the case. Changes in margin frequently take place due to factors outside the control of the salesmen.

In order to avoid this difficulty, it is sometimes suggested that a standard margin be determined for bonus purposes. If that standard margin is uniform for all goods, there is no reason why gross or net sales should not be used instead. If the margin varies between different types of goods, some advantage will be gained in the emphasis placed upon the profit in high-margin goods as compared to low-margin goods.

As a whole, the decision of the company was in favor of a plan which was perhaps more satisfactory than any of the others proposed. The increased incentive furnished by the bonus on volume would not have undesirable results, provided the management of the salesmen was such as to utilize the control furnished by the salary plan to prevent the salesmen from unduly emphasizing volume at the expense of quality of sales and development of good-will.

May, 1926

H. R. T.

105. MARY STUART CANDY COMPANY¹ I H.B.R. 381

COMMENTARY: An examination of the policies of sales departments with reference to the plan of compensation of salesmen during changes in business conditions reveals surprising differences of opinion. Companies using the straight salary plan are tempted to change to commission plans, and sometimes have done so, on the ground that a commission plan furnished greater incentive at a time when incentive toward volume of sales was particularly needed. Other firms accustomed to using the commission plan have added a salary element or have changed to the salary plan, in order to avoid the disruption of morale through low earnings in a period of depression and through excessive earnings in a period of inflation such as prevailed in 1919 and the early part of 1920.

The conclusion at which one arrives is that the applicability of one plan or another to a particular company's situation depends in large part upon the type of management; that is, a compensation plan cannot be made a substitute for management. Good management will make up for the deficiencies of almost any plan. The applicability of one plan or another depends also in part upon the type of work which is to be done by the salesmen and upon the type of men who customarily are hired to perform that work.

In the case of the Mary Stuart Candy Company, the consideration of a change from salary to commission plan of payment for salesmen was very definitely the result of the decline in sales incident to the

¹ Fictitious name used for purpose of disguise.

business depression. Good management of the sales force being assumed, it is probable that commission payment would have brought little more than a temporary increase in sales. Although it appears from the problem to have been the trade custom to pay salesmen on a commission basis, an examination of the task to be performed by the salesmen of the Mary Stuart Candy Company would indicate that such payment was illogical. Commission payment places emphasis upon volume of sales and particularly upon immediate volume of sales. The object of the Mary Stuart Candy Company was to establish stable repeat business in which candy would be sold by loyal and satisfied dealers to a public convinced that Mary Stuart candy was uniformly of good quality and uniformly fresh. The commission plan would tend to emphasize the volume of sales as against quality of sale. If the salesman were to consult his own long-run interest and if he expected to remain with the Mary Stuart Candy Company indefinitely, he would make sales of the quality desired even with a commission plan. Nevertheless, it would have been unwise to assume that the salesman was so foresighted that he would consistently refrain from overstocking the dealer and that he would consistently help the dealer in resale work, the results of which might not be realized except over a long period.

The objection brought against the salary plan, namely, that the commission plan permitted the use of sales quotas, was not sound. Careful control of the activities of salesmen is more easily possible under the salary plan than under the commission plan. Quota plans can be used with either. While the company might have expected the retailer who purchased an overstock of candy to be more aggressive in disposing of it than if he had a small amount, there was the danger that he would not reorder. It would have been much sounder for the salesman to help the retailer increase his selling capacity and to encourage ordering only in accordance with increased sales capacity. The salary plan, therefore, seems to have been more suitable for this company, which wished to guard against overstocking of customers, to build up agencies which would reorder willingly by mail between trips, and to have salesmen who considered it a part of their work to help increase the sales of their product through assistance to retail outlets. As is indicated above, it is conceivable that, combined with proper management, satisfactory results might have been obtained by the Mary Stuart Candy Company even from a commission method of payment. Obviously, however, it would have been unwise to adopt a plan which tended to accentuate a type of selling considered undesirable by the company.

106. BENCH PHARMACEUTICAL COMPANY¹ I H.B.R. 384

COMMENTARY: The plan of salesman compensation adopted by the Bench Pharmaceutical Company was a combination of salary, drawing account, commission, and bonus. The salary element furnished a small assured income to the salesman and increased the control of the company over the salesman's activities; the drawing account was merely a means of allocating certain amounts to the salesman to cover expenses; the commission furnished the additional compensation required to make the income of the salesman adequate to retain his interest, and furnished the incentive for the sale of particular classes of goods. The special bonuses offered from time to time enabled the company to emphasize one product or another without disturbing the whole commission system, and added an element of flexibility.

The plan would have to be tested continuously from the view-point of its furnishing the salesman an adequate income in total for the type of ability and the amount of work which he performed, and also from the view-point of attaining the desired volume of sales for the company at a reasonable cost. Whether or not the plan would work satisfactorily would depend upon two factors: first, the willingness of the salesmen to do the work which would not result in immediate sales; second, the ability of the management to impress upon the salesmen the need of good salesmanship of the type which would make customers and not simply immediate sales.

The plan was somewhat complicated but not to the extent which would make it difficult for the salesmen to understand it. The plan provided for some discretion on the part of the executives in fixing the annual salary and the drawing account, which obviously furnished some basis for dissatisfaction if salesmen did not have confidence in the executives. On the other hand, in the salary element, recognition could be given to length of service and loyalty of salesmen and to the performance of specially useful work which did not appear immediately in terms of volume of sales of the product. The use of junior salesmen involves separate problems which require special discussion.

May, 1926

H. R. T.

¹ Fictitious name used for purpose of disguise.

107. DARWIN PAPER COMPANY¹ I H.B.R. 388

COMMENTARY: From the view-point of the public as well as that of the employer, it is desirable to keep the cost of selling the desired

¹ Fictitious name used for purpose of disguise.

volume at the lowest possible figure. Because of the relative importance of the traveling expenses of wholesale salesmen, any compensation or management plan which is careful about compensation of the salesmen but not careful about expenses fails to bring about economy. Traveling expenses may be increased by carelessness of the salesmen, by extravagant and unwarranted expenditures, and by ignorance of the best methods of keeping down such expenditures. There is much, therefore, to be said for the desire to link up a salesman's compensation with his expense account in order that he shall have an inducement to make savings in expenses.

The novel feature of the Darwin Paper Company plan is that providing for a definite relationship between salary plus expenses and gross profits, allowing variation within a limit of 5%. Allowances could, therefore, be made for variations in business conditions and in living costs. The objections to the plan are chiefly related to the base of gross profits and not to the plan for variation between salesmen and territories. As described, the plan provided a very considerable field for the exercise of judgment by the sales manager. As long as good judgment was exercised in making variations from specified ratios, and as long as the sales manager possessed the confidence of the salesmen, the plan probably would work out satisfactorily. Therefore, as outlined, the plan possessed advantages of both commission and salary plans.

In any salary plan the sales manager must constantly study the relationship between salaries and performance to make the needed adjustments from time to time. A variation of salaries on the basis of a profit to the company is sound, provided the variations in profits are due to variations in quality and value of the work of the salesman, and not due to variations in other factors over which the salesman has no control.

May, 1926

H. R. T.

108. BAGLEY REFRIGERATOR COMPANY¹ I H.B.R. 391

COMMENTARY: The proposed change from the commission to the salary plan of compensating salesmen tended apparently to remove one of the chief incentives of the Bagley Refrigerator Company's salesmen, namely, the direct and continuous connection between volume of sales and the income of the salesmen. On the other hand, it would afford that relief from the anxiety regarding earnings during a period of

¹ Fictitious name used for purpose of disguise.

depression, which enables some salesmen to work much more satisfactorily.

Various types of work necessary for building up good-will in a sales territory but yielding results only over a long period of time may, under the salary plan, be required of a salesman. Other things being equal, the change to a salary plan should have the effect of making the salesman feel more clearly a member of the sales organization. There is a greater mutual obligation because the company is incurring a financial burden in maintaining the salesman on the pay-roll and is justified in expecting intelligent and faithful work in return for adequate compensation. The problems of management under the salary plan are somewhat more difficult and the responsibilities of management somewhat greater than under the commission plan. While it is true that the salary plan will bring problems of readjustment of salaries from time to time, in which it is difficult to eliminate personal prejudice and favoritism, the plan does permit compensation for the whole range of tasks constituting the salesman's work, instead of emphasizing only the one of securing orders and making sales during the current period.

Some salesmen prefer the commission plan because it apparently offers them greater independence and in prosperous periods greater income than the salary plan. Some objection to the change was, therefore, to be expected from those salesmen who had been able to secure sufficient incomes during the period of depression, and who had enjoyed large earnings during the period of prosperity. If those incomes had been no more than would have been required in a competitive market to secure the services of men of the ability needed, obviously the Bagley Refrigerator Company needed to consider the threat of the salesmen to resign much more seriously than if the salesmen had been securing an income out of proportion to the value of their efforts. If there was the possibility of replacing those salesmen with other men who could perform the work needed and to whom the proposed salary scale was satisfactory, the resignations of the old salesmen should have been accepted. Apparently those salesmen were not willing to work closely with the house, and although the volume of sales had been satisfactory, in other respects the quality of their work was open to question.

The salary plan, furthermore, permitted experimentation on the part of the executives with varying combinations of personal selling, advertising, and other methods, to determine as nearly as possible that combination which would yield the greatest results with the smallest outlay. The purpose of such experimentation is to cut down the unit cost of selling. The outcome of such experimentation may be to cut down the unit cost of personal salesmanship or of advertising, or to

increase one or the other as conditions may require. Concerning the facts upon which the Bagley Refrigerator Company was to act, the information is incomplete as to the type of sales effort needed to accomplish its task.

May, 1926

H. R. T.

109. HALLETT FOOD PRODUCTS COMPANY¹ 1 H.B.R. 394

COMMENTARY: Various cases upon compensation plans for salesmen have brought out the merits and objections of the primary plans of compensation.² It has been pointed out that the salary plan provides for more general control and furnishes compensation for all the various types of work of which the salesman's task consists, whereas the commission plan furnishes greater incentive but ordinarily confines that incentive largely to volume of sales. Numerous modifications and compensations may be made which will, in part at least, offset some of the objectionable features of the general plan.

The Hallett Food Products Company's desire was to remedy the lack of incentive furnished by the salary plan, by means of a division of a dividend fund in proportion to the salesmen's salaries. The emphasis upon total sales from which the fund was to be secured would give some incentive to those salesmen who realized fully that they were members of an organization, each part of which was expected to do its work, and to those salesmen who were not willing to do less than their full share in contributing to the dividend fund.

The disadvantage of the plan, however, is clear. Unless all salesmen were willing to contribute in effort to the sales of the fund to the best of their ability, some salesmen were sure to be contributing considerably more than others, and they would be securing from the fund less than an amount proportionate to their own part in achieving the company's success. If salaries for the example period amounted to \$100,000, and Salesman A's salary for the period was \$500, it is said that he would receive one two-hundredth of the dividend fund. But if Salesman B, with the same salary for the period, sold only half the number of cases sold by Salesman A in territory equally good, Salesman B would still receive one two-hundredth of the dividend fund.

The objection to the "dividend" plan is the general objection to all

¹ Fictitious name used for purpose of disguise.

² See also Langdon Card Index Company, 1 H.B.R. 375; commentary, 2 H.B.R. 512. Mary Stuart Candy Company, 1 H.B.R. 381; commentary, 2 H.B.R. 514. Bench Pharmaceutical Company, 1 H.B.R. 384; commentary, 2 H.B.R. 516. Darwin Paper Company, 1 H.B.R. 388; commentary, 2 H.B.R. 516. Bagley Refrigerator Company, 1 H.B.R. 391; commentary, 2 H.B.R. 517.

profit-sharing plans; it does not furnish the direct incentive hoped for it. Experience with profit-sharing plans has not been particularly successful. It is probable in the instance of the Hallett Food Products Company that the benefits which might be attributed to the dividend plan would be derived from careful management and from proper adjustment of salaries, so that each salesman would receive adequate income for his services, rather than from the dividend plan itself. If the salesmen in the branches were in close contact with each other, were friendly and loyal to one another and to the employer, obviously, the plan would be more effective than if the salesmen were working their territories alone, rarely coming into contact with one another or with their superiors.

May, 1926

H. R. T.

110. FEDERAL TRADE COMMISSION VERSUS WINSTED HOSIERY
COMPANY¹ 1 H.B.R. 398

COMMENTARY: Is misbranding of one's goods an "unfair method of competition" within the meaning of the act creating the Federal Trade Commission? Certainly misbranding may be used in the process of unfair competition, as where a brand is used to make the public believe that the goods produced by *A* are those of the well-known manufacturer *B*. In the case before us there was no actual competitor involved. At least none was mentioned. But by the argument that an honest competitor might conceivably lose some of the business that would probably have come to him if no goods had been dishonestly described, the Federal Trade Commission converted a case of an "unfair practice" into one of "unfair methods of competition," and assumed jurisdiction. By this argument almost any unethical practice makes a possible case for the Federal Trade Commission. The Circuit Court of Appeals, without specifically giving its approval to the practice complained of, ruled that the case was not within the province of the Federal Trade Commission. The Supreme Court, however, upheld the Federal Trade Commission and thereby extended its authority so as to make it the censor of conduct only inferentially relating to competition.

May, 1926

N. I.

¹ Supreme Court of the United States. Argued March 13, 14, 1922. Decided April 24, 1922. 258 U. S. 483.

111. PRESTONETTES, INC., VERSUS COTY¹ 1 H.B.R. 401

COMMENTARY: Unfair competition is a topic of the law distinct from the subjects of trade-marks and trade names. It is less technical, more a matter of business fact. Unfair competition may exist in the use of geographic or descriptive names, combinations of colors, styles of packages, lettering, designs, phrases, in which no monopoly can be acquired. The sole question is whether the misleading of the public to buy the competitor's goods in place of the goods he is seeking is the natural and probable consequence of the act complained of.

In the present case it is alleged that the use of a technical trade-mark or trade name to tell the truth may be so misleading as to constitute unfair competition. The American company submitted to a decree preventing it from using the French perfumer's name too conspicuously in articles of its own compounding but containing the genuine product of the French manufacturer. But where the truth is told in a manner that will not mislead, for instance, in the phrase "Made by Prestonettes, Inc., of genuine Coty products," without the treachery of fine and conspicuous print to hide something from the unwary, there is nothing in the law to prevent such a use of the trade name. Manufacturers confronted with the problem that Coty tried to solve here by reliance on the law of unfair competition have resorted to several methods to prevent dealers from rebottling or repacking or compounding their genuine products. They sometimes advertise widely that their goods never are sold in bulk, or that none are genuine unless sealed by the company. Other manufacturers try to devise non-refillable bottles. The law does not presume fraud on the part of the retailer and will not prevent him from reselling in small parcels an article with a trade name and telling the public what it is, provided he makes it clear that he has made the small parcels.

May, 1926

N. I.

¹ Supreme Court of the United States. Argued February 18 and 19, 1924. Decided April 7, 1924. 44 Sup. Ct. 350.

112. TENZNER RUBBER COMPANY¹ 1 H.B.R. 404113. AFFERIAT WATCH COMPANY¹ 1 H.B.R. 406

COMMENTARY: While with every sale of goods there is a warranty that the product will conform to the representations which have been made, expressly or impliedly, concerning it, in some lines it has been common practice to make specific guaranties either orally or in written

¹ Fictitious name used for purpose of disguise.

form, as notices attached to the product, in advertising, or otherwise.² It seems clear that the use of a written guaranty should not be adopted or continued by any company unless the guaranty possesses sufficient value as a selling point to offset the disadvantages which may arise from an indefinite number of claims by unknown persons involving difficulties of law and fact. The selling value of such guaranties is greatest when the quality of the product or the satisfaction to be expected from it cannot be definitely or fully ascertained by the purchaser at the time of purchase, and when the purchaser is convinced that just complaints will be promptly, liberally, and cheerfully adjusted.

In the case of the Tenzner Rubber Company the selling value of the written guaranty would have been lessened by the consumer's experience that guaranties are not always adjusted promptly and generously, and by the fact that the Tenzner Rubber Company was not sufficiently well known to make the guaranty convincing. Furthermore, the use of the written guaranty would have led to expensive abuse if the guaranty was not strictly limited. On the other hand, it would not have had substantial selling value or have created good-will if it were strictly limited or if complaints were to be liberally adjusted. Because of the difficulty of making clear to the consumer the limitations of a guaranty, its adoption probably would have increased friction with retailers and with consumers in adjustments, unless a very liberal policy had been adopted, which in turn, in all probability, would have been excessively expensive. The establishment by the Tenzner Rubber Company of a reputation for willingness to make adjustments for defective products was a sounder policy than the use of the written guaranty. While, in so far as the company could create confidence in its integrity, the proposed guaranty would have had selling value the greater because it extended beyond customary written guaranties in the trade, the danger of abuse, it must be repeated, was the decisive factor against adoption. It was probable that the company would not find it difficult to make up by extra selling effort for the lack of a written guaranty.

The selling value of the Afferiat Watch Company's time guaranty had been greatly reduced because the guaranty had been extended by unscrupulous manufacturers who had no intention of making good their promises. Furthermore, the life of a watch-case depends not only upon lapse of time but upon the type of use or abuse which the case receives. To protect the manufacturer from undue loss, the time guaranty should have conformed to a very conservative average period,

² For definition of what constitutes an express warranty, see The Sales Act, Section 12, quoted in footnote 3 on page 524, following.

so that with light usage the cases would last much longer than the guaranteed period, and only with unusually hard treatment would the cases fail to yield the guaranteed period of use. Under the conditions, therefore, the proposal of the Federal Trade Commission to abolish the time guaranty should have been adopted by the Affariat Watch Company. Had the company been alone in that action, it might have expected to suffer loss of sales because of the misinterpretation to which such action would be subjected. The unfavorable reaction which might be anticipated because of the withdrawal of the guaranty, however, would be reduced to a minimum by the company's pointing out that the Federal Trade Commission had recommended the withdrawal and also by the fact that leading and reputable competitors were adopting the same policy.

May, 1926

H. R. T.

114. GOSSMANN MACHINE COMPANY¹ I H.B.R. 411

COMMENTARY: The assumption is made that in this case the so-called wholesalers were really "agents" of the manufacturer—for if they were purchasers who resold, the warranties failed to bind the manufacturer to any one beyond the wholesalers who purchased directly from him. If there is a sale and a resale, there can be no contractual relation or warranty between the manufacturer and the second buyer. The loose use of the term "agency" to describe both the relation of principal and agent, and the very different relation between a manufacturer and an independent merchant who distributes his wares, has caused much confusion in the practice as to warranties, and may lead eventually to a situation in which the independent merchant can be regarded as the agent of the manufacturer for the purpose of creating a contract with the purchaser resembling a warranty in many respects. The difficulty arises out of the fact that the law of warranty grew up before the processes of manufacturing and selling became so widely differentiated as they are today.

There is, of course, a great range of variation in the importance of warranties. That depends on the complexity or simplicity of the thing warranted, on its being new or well tried, on the relative detectibility of its defects, and so forth. The types of warranties that have gradually come to be implied in sales² are hardly sufficient to take care of the needs of the purchaser of complicated machinery. They simply cover merchantability, fitness for specified purposes under certain con-

¹ Fictitious name used for purpose of disguise.

² The Sales Act, Sections 14-16.

ditions, conformity to samples and descriptions. Furthermore, there is no implied warranty of fitness, for any purpose, of things ordered by their trade name. Accordingly, express warranties are becoming matters of increasing importance in some industries.³ In such cases an analysis of the terms of the warranty, similar to that undertaken in this case, becomes desirable. It may be mentioned that what is desired is frequently a "condition" rather than a "warranty"—that is, an agreement to take back the machine if it will not serve its purpose, rather than an agreement to be responsible in damages if it does not.⁴ To this may be added a promise to replace defective parts under reasonable conditions. Such a condition and promise are very different from agreements to be responsible for all consequences flowing from hidden defects, such as personal injuries, destruction of property, and the like, for which a warrantor is liable regardless of the absence of fault on his part.

May, 1926

N. I.

³ Cf., The Sales Act, Section 12. "*Definition of express warranty.* Any affirmation of fact or any promise by the seller relating to the goods is an express warranty if the natural tendency of such affirmation or promise is to induce the buyer to purchase the goods, and if the buyer purchases the goods relying thereon. No affirmation of the value of the goods, nor any statement purporting to be a statement of the seller's opinion only, shall be construed as a warranty."

⁴ *Ibid.*, Section 11.

115. WATERTON & COMPANY¹ I H.B.R. 416

COMMENTARY: The machinery for handling adjustments on returned merchandise in department stores and departmentized specialty stores may be of three types: (1) a centralized plan involving the use of a single adjustment bureau for the entire store; (2) a decentralized plan placing the responsibility for adjustments on the buyers for the individual selling departments; (3) a decentralized plan placing the responsibility on the floor men of the various departments.

Through the use of the first plan greater uniformity in treatment is possible, better information perhaps can be obtained on reasons for returns of merchandise, and, in short, better control can be exercised. The fundamental objection to this plan, however, is that it runs counter to the convenience of customers.

The second plan takes advantage of the natural tendency of customers to return an article of merchandise, in the first instance, to the department where it was purchased. There are important drawbacks to this plan, however. In addition to the danger that a buyer may

¹ Fictitious name used for purpose of disguise.

urge the customer against her wishes to keep the particular article or to buy something else, there is also the important consideration that buyers frequently are away from the store on buying trips, and even when they are in the store their other duties may not permit them to spend much time on the selling floor.

It appears, therefore, that the third plan is likely to be the most logical one as a general rule. Floormen are available to customers at all times, are not likely to be so biased against accepting returns as are buyers, and presumably are more readily subject to control for the purpose of establishing uniformity in the treatment of customers desiring to return merchandise.

From the statement of the case and the decision of the company in this instance to have adjustments handled according to the second plan, it is probably to be inferred that this store did not have a well-developed organization of floormen, but was placing on its buyers the responsibility both for buying merchandise and for superintending the management of their departments with respect to control of sales force and the actual selling of merchandise.

December, 1925

M. P. M.

116. BADGER WATCH COMPANY¹ I H.B.R. 420

COMMENTARY: The experience of the Badger Watch Company in having the sales of the cheap Badger watches increase rapidly during the period when the higher-price Badger Lincoln watches were being advertised is significant. It leads to the conclusion that the advertising of the better grade, which was closely associated with the cheaper grade by a brand name, gave the impression of greater quality than the Badger watch previously had enjoyed. It also enhanced the prestige of the cheap watch and led consumers to desire it for reasons other than its cheapness.

From this experience, it would have been advisable for the Badger Watch Company to continue to advertise Badger Lincoln watches primarily for the purpose of stimulating the sales of Badger watches. In its advertising program, attention should have been directed both to the cheap watch and also to the high-price watch. The advertising should not have been confined entirely to Badger Lincoln watches after this introductory period was passed.

The company started out apparently to increase its line of products for the sake of the profit to be secured on the new line itself. In that it was not successful. What it did accomplish, however, was to apply

¹ Fictitious name used for purpose of disguise.

the principle of trading up, whereby the addition of a higher-grade product offered for sale under the same or an allied trade name resulted in stimulating the sales of the cheaper product. The expense that was incurred for advertising Badger Lincoln watches probably yielded greater results than the same amount would have produced in advertising Badger watches alone.

October, 1925

M. T. C.

117. WILDA BISCUIT COMPANY¹ I H.B.R. 422

COMMENTARY: This is a clear case of trading down. Despite the fact that the new product was sold in cases instead of packages and given a name which did not divulge the identity of the manufacturer, the utilization of the same sales force for selling Wilda biscuits and the new brand permitted the usual results of trading down to accrue. Orders for the cheaper brand were secured on the prestige of the established brand. If the company had not discontinued the manufacture of the new brand, it presently would have found that that brand had largely displaced the Wilda brand, and the anticipated economies in production would have faded away; the character of the company's business would have been altered substantially, and no net gain could have been counted upon to accrue from the alteration.

The contrast between this case and the Badger Watch Company's case² is to be noted. The chief product of the watch company was a low-price article, and the introduction of a higher grade added confidence and prestige. The Wilda Biscuit Company started with a high-grade product and by the addition of a lower grade threatened to undermine the prestige of its major line. These cases illustrate the difference between trading up and trading down.

October, 1925

M. T. C.

¹ Fictitious name used for purpose of disguise.

² See Badger Watch Company, 1 H.B.R. 420; commentary, 2 H.B.R. 525.

118. HARDY CONFECTIONERY COMPANY¹ I H.B.R. 424

COMMENTARY: The chief difficulty confronting the Hardy Confectionery Company lay in the determination of the effect upon sales and profits of the addition of a lower-price line to a high-quality line sold at a higher price. The problem appears in many forms, but the solution in any case depends upon several factors:

¹ Fictitious name used for purpose of disguise,

1. The quality of the proposed additional line in comparison with the lines already carried.

2. The possibility open to the average purchaser of judging relative differences in quality. It is obvious that if the differences in quality are easily perceived and understood by purchasers, the addition of a line of lower quality will not have a detrimental effect. Such an effect very possibly might follow from customers' confusion if the differences of quality are not easily discernible except after considerable use.

3. The prestige value of a product to the average buyer.

4. The elasticity of demand for the product. It is clear that where demand is elastic, the addition of a lower-price line satisfying the same wants should result in increased sales.

6. The intentions of the company as to which line it wishes to make its chief line. The company which plans to emphasize the lower-price line will not be concerned if the sales of the high-price line fail to develop, provided it is successful in the lower-price line. The company which aims to emphasize its high-quality line and wishes to maintain its reputation on the basis of that line will have to consider seriously the effect of adding a lower-quality or lower-price line.

In the present case it appears that the product which the company wished to emphasize was fancy package candy. It seems that fancy package candy is a product of such nature that the average buyer is likely to confuse lower and higher qualities if they are sold under the same brands. A certain amount of prestige is attached to higher-price candies, a prestige which has been developed on the basis of quality, advertising, and custom, and connected to some extent with the fact that they are high priced. The demand for candy is elastic, but the demand for candy as a whole probably is more elastic than the demand for candies which are sold within the price range which the Hardy Confectionery Company wished to emphasize. Lowering of price and of quality possibly would destroy some of the prestige value in candy purchased for gifts.

The first proposal, that of manufacturing a cheaper grade of chocolates and selling them under the Princess brand with a special designation, probably would have led to injury of the Hardy Confectionery Company's reputation, because consumers would tend to confuse the grades.

The second plan of putting the candy under some name other than the company's would have been somewhat less dangerous, but would have required more effort to sell the product. It would have been difficult, if not impossible, to prevent the public ultimately from learning that Vanity chocolates were made by the Hardy Confectionery

Company; the reputation of the company, therefore, would have been somewhat affected.

The proposal involving the least danger seems to have been the third plan, which was adopted. Because the quality in the new package would be as high as the quality in several packages sold by the company, there would be no detrimental effect upon the company's reputation for quality. Here any detrimental effect would depend primarily upon the extent to which Hardy candy was purchased on the basis of prestige value, which is connected with the price paid, and the extent to which the company wished to enter the lower-price field. The general principles governing such action are stated in part in an article in the *Harvard Business Review* as follows:²

1. It must be determined which of the products constitutes the firm's main line.
2. It should be remembered that the reputation of the company will be established by the lowest-priced line produced.
3. The principles are not operative where the difference in quality of the two grades is readily distinguishable by purchasers.
4. Sales in the lower-priced line are always increased at the expense of the higher-priced, even though advertising stresses the latter.
5. The principles illustrated are not operative unless the two grades appeal to the same general class of consumers and are capable of ready association in the minds of consumers at the time of purchase.

The decision of the Hardy Confectionery Company, therefore, to adopt the third plan proved to be mistaken, because the company's policy was that of emphasizing the building of its business upon the basis of its highest-quality line. It is probable, furthermore, that the company was not so well equipped, either in production or in selling, for competing effectively in the lower-price market as in the higher-price market. Under the conditions, therefore, it was wise to withdraw the cheaper grade.

May, 1926

H. R. T.

² "Adding a Product of Different Quality and Price to an Established Line," *Harvard Business Review*, April, 1925, Vol. III, No. 3, pp. 357-361.

119. FOND DU LAC MILK COMPANY¹ I H.B.R. 426

COMMENTARY: The expansion of the company's sales in the Middle West and Southwest naturally led the company to contemplate advertising in publications of general circulation. The success of the company and the advertising project coincidentally encouraged broadening

¹ Fictitious name used for purpose of disguise.

the scope of the company's market. In New England and the Middle Atlantic states large quantities of canned milk were consumed, and in those districts the magazines which could be used advantageously for advertising the company's product to consumers in its existing market area had large circulation. Hence it was logical for the company to seek means of securing a foothold in the market in New England and the Middle Atlantic states.

Inasmuch as the advertising program was to be inaugurated immediately, to strengthen the sales efforts in the existing market area, and since the advertising mediums selected reached many consumers in the northeastern territory, it was imperative that provision should be made simultaneously with the advertising for supplying such demand as was stimulated. If that provision were not made, the maximum results would not be realized from the expenditures for advertising. Inasmuch as this product belonged to the class of convenience goods, sales would be lost permanently if the article were not available at readily accessible stores when sought by consumers.

The plants in which Quaker milk was produced were purchased in order that the Fond du Lac Milk Company might have producing capacity available in the northeastern region for supplying demand aroused by its advertising. The chief object in purchasing a going concern rather than in building new plants was to acquire an established organization which already was in operation; the brand of the company whose plants were purchased was an incidental consideration.

Under these circumstances, it is clear that the Fond du Lac Milk Company could not consistently have continued to use aggressive sales methods on the Quaker brand, for that would have tended to nullify a part of the sales efforts on the Laurel brand. Internal competition between the two brands would have been wasteful. The sound course was the one which the company followed, of sidetracking the Quaker brand as rapidly as the output of the newly acquired plants could be disposed of under the Laurel brand.

Two points of significance stand out in this case: (1) the unsoundness of an individual manufacturer's maintaining competing brands for an article in the convenience goods class; and (2) the necessity of providing for general distribution of an article of convenience goods contemporaneously with the inauguration of a national advertising program.

120. CADBURY DEPARTMENT STORE¹ I H.B.R. 428

COMMENTARY: The case serves to bring out the difference between a "basement store" and a "bargain basement."

A department store which has basement space available for selling purposes may make use of that space in three possible ways: (1) for the operation of departments selling merchandise completely different in character from that sold elsewhere in the store; (2) for the operation of a basement store, carrying complete lines of merchandise similar in type to that sold in the main store, but lower in quality and price; or (3) for the operation of a bargain basement specializing in job lots, bankrupt stocks, mill ends, and the like.

When either of the latter two alternatives is followed, it may be assumed that the purpose is to increase the total sales volume of the store by attracting a stratum of customers different from that patronizing the main store. In view of the established theory that no single department store or departmentized specialty store can appeal successfully to two widely different classes of customers at the same time,² department store or departmentized specialty store can appeal successful in appealing to a low-class clientele by means of either a basement store or a bargain basement. The clue to this apparent anomaly lies in the fact that it is possible to establish a fairly clear sense of separation in the minds of customers between the main store and the store in the basement.

It appears to be of primary importance, therefore, that the merchandising policies should be such as to maintain this difference clearly. This evidently had not been accomplished in the Cadbury Department Store. The lack of success in the basement store operated by this company probably can be attributed in considerable part to the fact that the five merchandise managers in charge of the selling departments of the main store controlled the similar departments in the basement store. In the operation of either a basement store or a bargain basement, a store should observe the principle of using an entirely separate and distinct merchandise organization in order to create in the minds of customers a clear distinction between the main store and the basement enterprise. Under no circumstances does it appear to be a sound policy to use the basement primarily as a means of disposing of merchandise which has been found to be unsalable in the main store.

In a basement store, as distinguished from a bargain basement, there is perhaps greater ease of control because of the fact that full lines of merchandise commonly are carried. At the same time, how-

¹ Fictitious name used for purpose of disguise.

² For a parallel instance from the general field of marketing, see case of the Badger Watch Company, 1 H.B.R. 420; commentary, 2 H.B.R. 525.

ever, there is, in the case of a basement store, somewhat more danger of failing to preserve the sharp difference between the basement enterprise and the main store. This consideration probably was of particular importance in the case of the Cadbury Department Store, since the case implies that the store aimed primarily to attract customers with moderate incomes; in other words, it apparently was a medium-grade department store. For a store of that class it obviously is easier to preserve the difference between the basement and the main store if a bargain basement, rather than a basement store, is operated.

This case, therefore, may be said to point towards the principle that medium- and low-grade department stores, if they operate basements, should operate them as bargain basements rather than as basement stores, whereas higher-grade department stores may use basement stores successfully.

The factor of possible injury to prestige in connection with basement selling does not appear to be an important consideration except in the case of high-grade specialty stores.

December, 1925

M. P. M.

121. SUPERIOR MILK COMPANY¹ I H.B.R. 431

COMMENTARY: The proposal of the Superior Milk Company to enforce strictly the terms quoted to its buyers was justified in so far as the taking of extra time by those who deducted discounts was a violation of contract. The wisdom of such enforcement would depend also upon other factors. If the general tendency in the trade was toward longer credit terms or toward larger discounts, if important competitors of the Superior Milk Company were lenient in enforcing payment within the discount period, it is possible that the Superior Milk Company might have found it inexpedient to adhere to the strict enforcement of the discount terms quoted. In so far as the failure of wholesalers to pay within the time limit was due to their carelessness and to the passive acceptance of late payments by the Superior Milk Company, increased activity in enforcing discount terms was warranted. Furthermore, wholesalers would more readily understand and sympathize with the desire of the Superior Milk Company to enforce its terms than would retailers. When some delay or mistake of the Superior Milk Company was responsible for the failure of the wholesaler to pay within the discount period, obviously exceptions to the policy of enforcement would have to be made. Likewise, in effecting the change of enforcement policy, the Superior Milk Company would have to be

¹ Fictitious name used for purpose of disguise.

careful to announce it to wholesalers and to explain the reasons for change to salesmen and other representatives who came in contact with the wholesalers. Failure to enforce terms would result in favoring those who did not pay promptly.

It will be noticed that the enforcement of cash discount terms emphasizes chiefly the cash discount as a premium for prompt payment for goods bought on credit terms, but the cash discount as it has come to be used in business contains three elements: first, premium for prompt payment or payment for reduction in risk based on the assumption that, other things being equal, the shorter the credit term the less the risk; second, interest upon funds which with prompt payment are placed in the hands of the seller for the unexpired credit term; third, a reduction in selling price. When the cash discount consists chiefly of a reduction in price, that is, when in amount it goes beyond the reasonable compensation for reduction in risk and interest, there is reason for favoring an allowance of part of the discount, even after the stipulated discount period has elapsed. However, that factor is not important in this case, and the decision is approved.

May, 1926

H. R. T.

122. ARNOLD MACHINE COMPANY¹ I H.B.R. 434

COMMENTARY: The problems facing the Arnold Machine Company in 1922 were particularly difficult. In the spring and summer of that year the question of the economic recovery of Europe was a baffling one. Not only were there the problems of normal economic recovery after the exhaustion of the great war, but the uncertainties growing out of the settlement of reparations and the problems connected with social and political as well as with economic readjustments. These difficulties would affect directly or indirectly almost every business exporting from the United States, and particularly the export of industrial equipment goods such as machine tools. In the case of the Arnold Machine Company, the European situation was made still more significant by the fact that, on the basis of pre-war business, Europe normally absorbed 30% of the company's total production.

The company's decision to maintain its European sales organization and to maintain prices in the face of the economic situation in early 1922 was necessarily based upon the company's interpretation of Europe's economic outlook in 1922. If ultimate, even if somewhat delayed, recovery could be expected, the wisdom of keeping its well-developed sales organization intact and of following its policy of price

¹ Fictitious name used for purpose of disguise.

maintenance would be established. Once disorganized, the upbuilding of an efficient body of technical salesmen in Europe, such as those of the Arnold Machine Company, would be difficult. The existing sales force personnel must be maintained if possible. If recovery could not be looked for, however, or if it could not be hoped for within a reasonably short time, then drastic retrenchment in its sales organization would be necessary and possibly also temporary changes in its price policies.

Although the company's experience from 1922 to 1924, as recorded in the case, seems to indicate the wisdom of the decisions made in 1922, at the time the decisions were made there were no sure bases on which to rest a prediction as to the immediate increase or decrease in European purchases of American textile machinery. The many uncertain factors in the situation, social and political as well as economic, made prediction unusually difficult.

The economic factors alone considered, however, the weight of evidence was probably in favor of moderately increased sales. Equipment material such as textile machinery was needed in large amounts in Europe both for reconstruction of devastated plants and for replacements that had been neglected during the war. Cost of production was high in Europe because of dislocation of industries, the shortage of capital, the higher wages and shorter hours that had been established, and the general disorganization that had followed the war. In view of the large natural resources of Europe and the generally favorable natural conditions for economic recovery, combined with the large and energetic population and the high development of commercial life, it seemed that ultimate recovery of Europe's position would be inevitable.

If industrial recovery did take place in Europe, such equipment-material imports as American automatic textile machinery would be favored over imports of manufactured goods in general, especially over imports of consumers' goods. On the other hand, industrial expansion and rehabilitation might be long delayed if political and financial conditions centering around reparations and inter-ally debts were not settled. Depreciated currencies and exchanges were a handicap to importations from gold standard countries like the United States; and no plan was then in sight that promised a remedy for the situation. Even if a plan for payment of reparations should be agreed upon and successfully put into operation, this very fact would place a handicap on Europe's importations of manufactured products from the United States. For a successful plan of reparations would carry with it the conditions necessary to produce goods more cheaply in Europe. Purchases of textile machinery in Europe rather than in the United States might thus be favored. In analyzing such factors as these, however, there could have been no certain conclusion in 1922.

Even the increased sales of the Arnold Machine Company in Europe during 1922 and 1924 cannot be regarded as certain evidence that American sales of textile machinery in Europe could continue to expand. These increases may have been but temporary, resulting from the extreme necessities of reconstruction; from the fact that the European machinery industry had not yet recovered; from the considerable extension of credits and loans by the United States to European purchasers; and from other reasons of a similar nature.

Even now, there still remains the question as to what will be the effect on machinery importations into Europe when reparations and inter-ally debt payments are in full force. Will Europe not be an increasingly difficult market in which to sell under these conditions, particularly as Europe's industries become more fully and firmly established?

If the quality of Arnold automatic machinery is so superior as to be able to overcome all reasonable price handicaps and to hold the European market in the face of exchange conditions that will adversely affect other types of manufactured imports from the United States, then it may be expected that the expansion of sales that took place from 1922 to 1924 may continue. The sales will be upon the basis of quality, not of price. Under these conditions, price concessions would seem to be of little use in stimulating trade. By making the small economies mentioned in the case, the company's decision would tide over a short period of depression without disrupting the organization. The uncertain factor is the length of the depression period. Since the results were unpredictable, the company seems to have followed a wise policy in maintaining its sales organization and in not making price concessions in 1922.

March, 1926

G. B. R.

123. COHOON RADIATOR COMPANY¹ I H.B.R. 440

COMMENTARY: The problem in pricing faced by the Cohoon Radiator Company arose principally from the following three sets of factors:

1. *Seasonal Demand.* Seventy per cent of the annual sales were for delivery between July 1 and January 1, and it was not possible, even if it had been desirable, to adjust production to demand, since demand during the last six months of the year exceeded the production capacity of the plant.

2. *The Practice of Contracting for Future Delivery.* Dealers did

¹ Fictitious name used for purpose of disguise.

not carry stocks, and an average interval of six months elapsed between the time when an order was placed and the shipment.

3. *Seasonal Increase in Production Costs.* The increase in production costs between March 1 and October 1 averaged 13% of the March 1 costs. This increase was in part due to the seasonal character of demand and in part due to other causes.

The company's price quotations already included the carrying charges on the excess production for the first half-year. In addition, however, it was desired to adjust the price quotations to cover the seasonal increase in production costs.

It was obviously not feasible to bill goods at the prices effective on the dates of shipment, since the contractors, who were the company's customers, had to know prices definitely at the time of ordering.

The company's solution of the problem through the adoption of a sliding scale of prices, based on a division of the year into five periods, is open to question. This policy apparently considered only the supply side of the price equation; furthermore, it involved a too short time relationship of costs and prices. To cite only one of the disadvantages of the too short time relationship, it was likely that the determination of costs over such a short period would involve the use of more or less arbitrary estimates, particularly with reference to overhead costs. Again, it does not appear that the seasonal variations in demand were susceptible of change through alterations in price policy, inasmuch as this product was one subject to joint demand; and, in any event, the seasonal variations in costs were not due wholly to the seasonal variations in demand.

Under the circumstances, a policy of price stabilization over periods long enough to eliminate the seasonal changes in costs would have been desirable. Under such a policy, prices would have been set so as to absorb cost differentials and obviate the necessity of frequent price changes. Average cost figures might well have been used for pricing purposes. From the standpoint of sales management, it seems likely that a price stabilization policy would have been advantageous in dealing with customers.

June, 1926

M. P. M.

124. SHELDON CHAIN-STORE COMPANY¹ I H.B.R. 442

COMMENTARY: Since the chain-store company in this case found itself forced to pay the same price as unit grocery stores in buying bread from independent bakeries, it appears to have been justified in

¹ Fictitious name used for purpose of disguise.

making arrangements for another source of supply. A chain-store company, performing as it does both wholesale and retail functions, is entitled to buy at a lower price than a unit grocery store, even when, as was presumably true in this case, the bread actually is delivered by the independent bakeries direct to the individual stores in the chain.

In the statement of the case some emphasis is placed on the lower production costs of the bakery established by the chain-store company. Even on the supposition, however, that these economies were not actually realized, the chain-store company still presumably could have sold bread, as it did groceries and other food products, at lower prices than those charged by unit stores, because of its more effective methods of operation and control.

It may be assumed, therefore, that the principal price problem in this case was whether to sell bread at a price lower than the usual chain-store price for this commodity.

The company assumed that a reduction in the price of bread would cause a considerable increase in sales of that product. This assumption needs to be carefully examined. The demand for bread in the aggregate is clearly inexpandible in character. It was not to be expected, furthermore, that existing customers of the chain-store company would increase their consumption of bread because of the lowered price. Hence, an increase in sales would have to be secured either from customers attracted away from unit stores or from customers attracted away from competing chain stores. As regards the first possibility, it does not appear likely that customers who habitually traded with unit stores because of such factors as credit and delivery service and greater variety for selection, would be attracted to a chain store merely because of a reduction in the price of bread. In the case of customers of competing chain-store companies, however, who presumably were actuated to a considerable extent by the motive of *economy in purchase* and who had a less strongly fixed allegiance to particular stores, it was possible that the lower price of bread would prove an attraction.

On the other hand, a reduction in the price of bread below the normal chain-store price was likely to be met with similar price reductions by other chain-store companies, either on bread or on other staple commodities. Furthermore, in the aggressive sales efforts necessary to develop any new brand, some difficulty was to be expected in trying to emphasize both price and quality at the same time.

It appears likely that the increase in sales during the first week in which the new brand of bread was supplied to the stores was attributable largely to aggressive sales efforts and, therefore, was not conclusive proof of the soundness of the company's price policy. Bread is

not a commodity for which it is profitable to use aggressive sales efforts over a considerable period of time.

It is a fair conclusion that a chain-store company under these circumstances ordinarily will not find it advisable in the long run to reduce the price of such a commodity as bread below the usual chain-store level.

June, 1926

M. P. M.

125. HILTON DEPARTMENT STORE¹ I H.B.R. 444

COMMENTARY: The underlying question raised in this case is whether a department store, instead of including the cost of rendering credit and delivery service in the prices paid for merchandise, should undertake to make separate charges for credit and delivery service to those of its customers who actually use these services.

On a purely abstract basis, it might be argued that customers who do not avail themselves of credit and delivery service should not be expected to stand part of the cost of those services. As described in the case, however, the practical difficulties both in the determination of the amounts to be charged for such services and in the administration of such charges are very considerable. An even more important objection to this plan is the attitude of the average consumer, who evidently rebels at the idea of paying specifically for service as such but does not object to paying indirectly for these services in the form of higher prices for merchandise. This attitude is much the same as the psychology underlying the theory of indirect taxation.

It is conceivable that the objections of customers would be removed in considerable degree if the operation of the plan were reversed so that the marked prices of merchandise would include charges for credit and delivery service, with a system of rebates operating to the benefit of customers who did not use these services. Such a plan, however, would not obviate the practical difficulties described in the case.

In some respects the situation is analogous to one of joint cost. The cost of the merchandise and the cost of the services rendered to the customer cannot be effectively separated in determining retail prices. Nor does it appear that this situation is a source of real injustice to customers. Various types of retail stores offer different degrees of service to their customers, all the way from the strictly cash-and-carry type of store to the high-grade specialty store with elaborate service features. Customers are under no compulsion to trade with any one particular type of store; they have entire freedom of choice. There-

¹ Fictitious name used for purpose of disguise.

fore, the customer who has chosen to trade at a store which customarily offers credit and delivery service properly may be expected to pay, as part of the price of the merchandise purchased, for the opportunity of using credit and delivery service whether or not these services actually are used.

The general conclusion pointed to by this case is that a department store ordinarily should not undertake to separate charges for service from the retail prices of its merchandise.

November, 1925

M. P. M.

126. WETHERELL DEPARTMENT STORE¹ I H.B.R. 447

COMMENTARY: This case describes the plan which a department store used in allocating rental charges to its various departments. The main features of the plan may be summarized as follows: (1) The selling departments were assigned their locations before rental charges were allocated to the various floors and without reference to the question of rental expense. (2) Rental expense was prorated arbitrarily to the various floors; the second, third, fourth, fifth, and sixth floors all were given substantially the same proportion, while the basement and the first floor were given higher proportions. (3) No rental charge was made to the offices or to the general service departments; that is, rent was allocated only to the selling departments. (4) The allocation of rental charges to departments on a given floor was based on a uniform charge per square foot rather than on a weighted charge per square foot.

There can be little question as to the propriety of having the problem of the allocation of rental expense follow rather than precede the problem of locating the various departments.² It is also clear that the allocation of rent to the several floors must be arbitrary. Local conditions probably differ too widely to permit the use of any uniform scientific basis for this allocation. An interesting feature of the plan described in this case is the assignment of substantially equal proportions of rental expense to the second, third, fourth, fifth, and sixth floors. The assumption appears to be that it is as easy to draw customers from the first floor to the sixth floor as from the first floor to the second floor. Such an assumption probably presumes the operation of express elevators. It may be questioned, however, whether there is not a fairly definite limit above which it becomes increasingly difficult to attract customers.

¹ Fictitious name used for purpose of disguise.

² See commentary on the Norlin Company, 2 H.B.R. 290.

Although the department store's decision not to allocate any rental expense to non-selling departments apparently is in accord with the practice of a majority of department stores at the present time, there are, in theory at least, grounds for questioning this decision.

The total annual rental charge for the entire store building of this department store was \$350,000. Of this amount, \$333,000 was charged to the departments selling merchandise, \$7,000 to a display department on the seventh floor, and \$10,000 to a restaurant for customers on the eighth floor. If rental charges had been allocated to non-selling departments, such as the general offices and the receiving and marking rooms, the amount of rent charged to the selling departments conceivably might have been \$300,000 instead of \$333,000. Under these circumstances, \$33,000 would have been charged, in the first instance, to the general offices and other non-selling departments, to be included as part of their expenses, and in that form charged finally to the departments selling merchandise.

The object of prorating expenses in a department store is to show as faithfully as possible the true expenses incurred in the operation of each selling department. Yet, under the plan used by this store, the rental expense of the non-selling departments is distributed to the selling departments on the basis of the particular floors which those departments happen to be on and the number of square feet of space which they occupy, instead of on whatever basis is proper for the distribution of the expenses of non-selling departments. It seems logical to inquire why a selling department on the first floor should pay a higher pro rata share of the rent of the general offices or receiving room than is borne by a department on the second floor.

It might be objected that the allocation of rental charges to non-selling departments involves a double distribution of expense. This objection, however, does not appear to be particularly serious, since the rentals charged to non-selling departments will not vary frequently; the amounts of the rentals can be added monthly to the other expenses of the respective non-selling departments and the totals prorated to the selling departments on the bases appropriate in the various instances.

The advisability of using a uniform square-foot basis rather than a weighted square-foot basis for allocating rental charges to departments on a particular floor also appears to be open to some question. If the results are to be equitable under this plan, the store layout must be ideal; that is, on any given floor, each department must occupy the position which is best for it. While such an ideal situation perhaps can be approached, it probably never can be approximated closely enough to avoid some inequalities in the relative position of departments on

the same floor. On the first floor, for instance, are commonly located those departments which have relatively low unit prices and which depend for their patronage primarily on customers attracted into the store by other departments. It seems reasonable to suppose that locations along main aisles or near the entrances which are most used are of greater value to any of the departments on the first floor than are some of the other locations on that floor.

If the reasoning on these latter two points of procedure is accepted, the principles governing the allocation of rental charges in a department store may be stated as follows:

1. The prorating of rentals should follow rather than precede the determination of locations for the various departments.
2. The division of rental charges among floors is governed by conditions in the particular store and usually must be made on an arbitrary basis.
3. Rental charges should be prorated in the first instance to non-selling departments as well as to selling departments.
4. For the allocation of rental charges to departments on a given floor, a weighted square-foot basis is preferable to a uniform square-foot basis.

November, 1925

M. P. M.

127. JAYNES SPECIALTY STORE¹ I H.B.R. 452

COMMENTARY: The purpose of allocating indirect expenses to the various selling departments of a department store is to determine as accurately as possible the true cost of doing business for those departments. This statement is subject, however, to the general limitation which affects all processes of accounting and control, namely, that the expense of the methods used must not be greater than the practical value of the results which they yield.

The instances given in the case illustrate the obvious inequity of distributing the expenses incurred in the receiving and marking room to the selling departments on the basis of the cost of merchandise handled. From the statement of the case it may be presumed that the principal item of expense incurred in the work of receiving and marking was that of salaries and wages. The ratio of such expense is not given for this particular store, but some notion of the relative importance of this expense item is afforded by the common figure of 0.3% of net sales for salaries and wages of receiving, marking, and stock-

¹ Fictitious name used for purpose of disguise.

room employees in department stores with net sales of \$1,000,000 and over in 1924, as reported by the Harvard Bureau of Business Research.² On the assumption that the net sales of the store did not exceed \$3,000,000 per annum, the actual amount of expense which this issue involved must have been less than \$10,000. It is clear that no great leeway existed here for the development of elaborate cost-finding systems.

On the other hand, it may be pointed out that after a fair basis had been determined for the allocation of these particular expense items, no additional expense would be incurred, except for occasional tests of the fairness of the plan adopted. Even if the time studies were carried merely to a point where they furnished only a rather rough and somewhat arbitrary basis of allocation, it is likely that such a basis would be considerably more equitable than the previously used basis of cost of merchandise handled.

It is also to be borne in mind that the time studies described have an important supplementary value, not only in stimulating employees to greater output, but also possibly in furnishing new bases of compensation for employees engaged in this type of work.

December, 1925

M. P. M.

² Bureau of Business Research, Harvard University, *Bulletin No. 53, Operating Expenses in Department Stores in 1924*, p. 58.

128. BENTON CAB COMPANY¹ I H.B.R. 456

COMMENTARY: This case is a good illustration of the effect of what is known as "load factor" on the operating of a public utility. Where the fixed investment or the fixed charges are relatively high, it is necessary to keep the investment in constant productive use in order to earn a profit at low prices. High prices tend to limit the market and make a business unstable and speculative. To make a business safe, large and constant volume must be obtained. This can only be done by low prices and narrow margins of profit.

In the taxicab business the charges for wages, depreciation, insurance, taxes, and interest are large. They do not vary directly with mileage run. If mileage run is low, fixed charges may be 75% of all costs, but it is entirely possible to keep the cabs so busy as to reduce fixed charges to 30% of all costs.

There are two ways to stimulate traffic, service and price. The latter brings results more quickly but will not hold trade without service.

This company acted on sound business principle. Standard of

¹ Fictitious name used for purpose of disguise.

service depends on the driver. The bonus or prize system used was good. Volume is a function of price. The company was wise to cut the rate. After the business was established, it might have been cut again, but probably wages should be raised, as careful driving would greatly reduce costs. Few businesses depend more on the character of the operatives.

December, 1925

P. C.

129. CALDWELL TELEPHONE COMPANY¹ I H.B.R. 460

COMMENTARY: Telephone rates to individual subscribers cannot be fixed on cost of service, because it is impossible to determine individual costs accurately in a joint use of a complicated system. There are certain costs, however, such as the costs of establishing and discontinuing service, which can be approximated, and the failure to recognize such costs as between customers receiving service for long periods at a given location and those having service at one location for short terms would be discriminatory. Furthermore, it would hardly be good business to absorb such costs in the general rate level and thus to raise the general rates. On the contrary, to charge the full cost of establishing and discontinuing service might retard the development of the business. The company, therefore, quite correctly considered the influence of cost of service and value of service in making rates and effected a compromise which it believed to be to the best interest of the business as a whole. This policy was perfectly fair to all telephone subscribers, because the value of telephone service increases as the number of subscribers increases.

This case treats with one phase of the subject of service connection charges and does not purport to cover the subject wholly, for to do so would involve a rather detailed explanation of different charges and their application, such as different charges for business and residence stations, main and extension stations, and also different charges depending upon whether instrumentalities are in place or not in place at the time service is established.

This case also provides an interesting suggestion of a method which at first glance might be used to check overexpansion. In prosperous times, when wages are high and employment general, the number of small telephone customers tends to increase very rapidly. This may not be entirely desirable if a relatively large number of such subscribers will abandon their service when wages fall or unemployment increases, because the telephone company thus will be forced to make a large

¹ Fictitious name used for purpose of disguise.

fixed investment which may later be a burden on the permanent customers. While it might theoretically be desirable to exercise some control over this condition, however, it seems doubtful that the service connection charge could be used for this purpose, and the situation may be one which must in practice be accepted as fundamentally dependent upon economic conditions.

December, 1925

T. H. D.
P. C.

130. CALDWELL TELEPHONE COMPANY¹ 1 H.B.R. 464

COMMENTARY: At first glance this case might seem to illustrate the same principles of rate-making as the preceding case,² but there are several differences. The cases are similar as regards the principle of allocating expenses to subscribers responsible for causing them. This practice is sound, but it cannot be carried so far in the preceding case as in the present one, without interfering with the development of the business. Clearly, a customer should be charged a larger proportion of the full cost of a long cord than of a new installation. The larger charge is equitable, because other subscribers get no benefit from a longer cord while they benefit materially from each new subscriber.

The long-cord problem, furthermore, involves the principle of protecting the quality of the service.

June, 1926

P. C.

¹ Fictitious name used for purpose of disguise.

² Caldwell Telephone Company, 1 H.B.R. 460; commentary, 2 H.B.R. 542.

131. ECKERLY MANUFACTURING COMPANY¹ 1 H.B.R. 467

COMMENTARY: Here a variety of old legal devices were utilized in new ways to meet a comparatively new business situation. The new situation was the result of a splitting off of the function of extending credit to customers from a retail business so as to have it taken care of by a separate organization. The problem was to find a legal framework that would accomplish the following purposes:

1. Balance the relations between the manufacturer and the financing corporation;
2. Establish proper relations between the selling and the financing corporation;

¹ Fictitious name used for purpose of disguise.

3. Give security to the lending corporation;
4. Enable the lending corporation to utilize its security for borrowing from banks;
5. Avoid the consequences of the usury laws;
6. Avoid coming under the banking laws.

To accomplish the first of these purposes the modern device of the subsidiary corporation was used; it gives control without too great a risk or the impairment of the credit of the parent (manufacturing) corporation. To accomplish the second purpose, several of the more obvious plans had to be laid aside to avoid the dangers enumerated below, yet it was necessary to maintain such relations with the retailer as would hold him to a high responsibility for collection and give him a motive for the exercise of care in the recommendation of customers for credit. The device of agency was utilized to hold him to a strict accountability for the money he collected, and other devices described in the case were planned to give him the necessary interest in the credit risk. For security the lending corporation looked to a chattel mortgage, and to make the security available for further financing, the transaction was represented by a negotiable instrument rather than a book account. The direct responsibility of the retailer for each account could not be used without giving the whole transaction the appearance of a loan to the retailer, and thereby incurring consequences connected with the usury and the banking laws. The assembling of all these legal devices to meet the needs of a new business set-up was, of course, experimental. A very slight change in the law or a difference with reference to the price of the article sold or the type of customers dealt with, might make a complete readjustment of devices desirable.

May, 1926

N. I.

132. KITTELL & COMPANY¹ I H.B.R. 472

COMMENTARY: Foreclosure to satisfy bondholders is a comparatively rare occurrence in spite of the legal theory that the mortgage behind the bond is the basis for the credit extended. It ordinarily serves its purpose as an extreme threat that causes all the parties in interest to come together and protect the bondholders in order to protect themselves. What distinguishes this case from the ordinary case is the separability of the property both by reason of the nature of the business and because an opportunity actually presented itself to the

¹ Fictitious name used for purpose of disguise.

protective committee to make the sale on reasonable terms. Ordinarily to keep the property from losing much of its value it is necessary to keep the concern in which it is used going as a unit. A "reorganization" rather than a foreclosure results.

May, 1926

N. I.

133. BOOTHBY FOUNDRY COMPANY¹ I H.B.R. 483

COMMENTARY: Since the Boothby Foundry Company was engaged primarily in manufacturing, its opportunity to show a substantial profit depended upon its industrial operations rather than on small gains from the investment of its surplus. In carrying on its production activities, the company relied upon bank credit for at least a part of its working capital. The bank, if it followed the usual custom, had extended the loans for temporary requirements only and expected that they would be liquidated periodically. The Boothby Foundry Company's credit standing would be improved to a greater extent if it used the surplus of \$25,000 for the reduction of existing loans in June, 1924, than if it used the money to obtain a nominal profit through financial operations. This was particularly true in the light of the company's proposed operations, which would require additional borrowings from the bank in October. It was important that the company handle its affairs in such a manner that not only the existing lines of credit would be kept open but that still larger lines of credit would be available in the future if the company had need of them.

Since this surplus of \$25,000 was of a temporary nature only, it should not have been used to reduce capitalization through the purchase of the company's own preferred stock. There was some question as to whether or not this stock could be sold to the public without loss when money was again needed. If the stock were not resold, the amount of capital which the bank would be asked to furnish in October would be increased. The purchase of shares of the company's own preferred stock also would have raised the question of the company's relationship to the owners of these securities.

The purchase either of 90-day commercial paper or of tax-free securities would yield a lower return than the saving in interest that would be secured by paying off the bank loans. In addition to the monetary loss from lower yield, there was also the danger in the case of tax-free securities that there might be some capital shrinkage resulting from a fall in bond prices.

The conclusion is that, since the Boothby Foundry Company relied

¹ Fictitious name used for purpose of disguise.

on bank credit for at least a part of its current requirements, the management followed a sound policy in using its surplus to retire bank loans and thus to insure continued access to this source of capital.

February, 1926

A. S. D.

C. E. F.

134. ALLIS POTTERY IMPORTERS, INC.¹ I H.B.R. 486

COMMENTARY: The significant issue raised by this case is whether or not a wholesale importer should render financial aid to a foreign manufacturer in order to retain exclusive agency distribution for that manufacturer's product in the United States. Control of foreign sources of supply by an importer is frequently desirable, sometimes necessary. If maintenance of quality of goods or assurance of an adequate supply and low costs can be secured only by direct control of foreign production, the importer may find it to his advantage to seek such control. This may be done by actual ownership and operation of a factory abroad, as in the case of the Lamberti Grocery Company.²

At other times actual control of production may be unnecessary but the importer may be required to extend financial aid to the foreign manufacturer in order to secure the quantity and quality of goods desired in competition with other merchants. This is frequently true in new countries where capital is scarce, interest rates high, and production seasonable. At the close of the World War even the older industrial countries of Europe suffered from shortage of capital and looked for financial aid to their foreign customers.

In the case here under consideration the maintenance of quality of product by Dijon Frères was not questioned. The firm was an old one with proved reliability. Actual control of production by Allis Pottery Importers, Inc., was neither required nor desired. Production was not sufficient, however, to meet export demands and Dijon Frères were financially unable to expand their plant without aid.

Under such circumstances, therefore, Allis Pottery Importers, Inc., faced the problem of supplying the requested funds with the possible alternative of losing the exclusive agency for the firm in the United States. The action of Dijon Frères in asking for funds might be interpreted as a form of coercion to force Allis Pottery Importers, Inc., to make the loan. Such, however, was probably not the intention. Because the importing company oversold the capacity of the pottery, there was a need of plant expansion which Dijon Frères themselves could not finance.

¹ Fictitious name used for purpose of disguise.

² I H.B.R. 325; commentary, 2 H.B.R. 494.

The permanent investment Dijon Frères asked of Allis Pottery Importers, Inc., apparently was to give the latter no control over the management of the pottery. The loan, if made, would be primarily in order to enable Allis Pottery Importers, Inc., to maintain the good-will of Dijon Frères and, therefore, the exclusive agency.

Herein is the chief weakness of the proposal: Investment by Allis Pottery Importers, Inc., could have placed only "moral responsibility" upon Dijon Frères to continue the agency relationship. The risk that Dijon Frères would cancel the agency was probably slight, however, in view of the past reliability of the firm and its relationship with Allis Pottery Importers, Inc. Moreover, as an investment, the plan appears to have been comparatively safe. No industrial investment in France at that time would have been safer than in an exporting industry, the demand for whose product in the United States had already been built up to a volume greater than could be supplied. Industrial and financial uncertainties would affect such an industry less than one dependent solely upon the domestic market or on other European markets. Furthermore, the international financial situation favored exports from France to the United States. French currency was depreciating in terms of United States currency, thus favoring exports from France. While the novation of the French debt to the United States had not been accomplished in 1923, if debt payments were made later, they also would favor exporting. Apparently, chinaware would continue to be imported into the United States over the high tariff.

The peculiar situation in the pottery industry as outlined in the case, therefore, favored making the investment. Allis Pottery Importers, Inc., was one of the four importing wholesalers in the United States that maintained direct connections with foreign potters. The tendency in the trade apparently was toward increasing control of the potteries by the direct marketing of their products in the United States. The investment would seem, therefore, to have promised reasonable assurance that the import company could maintain the exclusive agency for a reliable firm whose products it already had advertised and developed; that it would have a sure source of a high-quality product; and that it would be able to maintain direct connections with the French pottery and to control exclusive patterns.

April, 1926

G. B. R.

145. RAND PUBLIC UTILITIES COMPANY¹ I H.B.R. 519

COMMENTARY: This case does not call for extended commentary, because the advantages of the inclusion of a provision for redemption

¹ Fictitious name used for purpose of disguise.

in the bond indenture are explained in the case.² The cyclical movements of bond prices and interest rates make the inclusion of the redemption clause of advantage to the borrowing company, since it sometimes becomes possible to refinance with a net saving by calling old loans and putting out a new issue bearing a lower coupon rate. Frequently, also, the credit standing of the borrowing company improves. This was notably the case of companies which were forced to fund floating indebtedness at high rates in 1920 and 1921.

December, 1925

H. B. V.

² 1 H. B. R. 519-520.

146. FARMERS' EXCHANGE BANK¹ 1 H.B.R. 522

COMMENTARY: The directors should have followed the policy proposed by the cashier of the bank. In 1919 prices of farm products, including prices of cattle and sheep, were high, and many farmers had gone into debt for the purchase of land and equipment. Much of the territory in the semiarid sections of the West had been brought into cultivation in the period of high prices occasioned by the war, and the continuance of this land in cultivation was dependent upon the maintenance of such prices. For a bank to tie up a considerable portion of its funds in paper secured by miscellaneous chattels pledged by farmers and ranchers was not a sound policy for any bank, and those banks which did not resist the temptation to lend upon such security suffered severely in the period of liquidation. Much of the semiarid land subsequently went out of cultivation and the banks found themselves in possession of mortgages which it was not worth while to foreclose.²

December, 1925

H. B. V.

¹ Fictitious name used for purpose of disguise.

² For discussion of the deflation of agricultural prices and its effects upon the agricultural sections of the country, see the *Report of the Joint Commission of Agricultural Inquiry*, House Report, No. 408, 67th Congress, First Session, especially Part I, from page 36 of which are taken the tables of index numbers shown at the bottom of the opposite page.

147. SEVENTH NATIONAL BANK¹ I H.B.R. 526

COMMENTARY: The fundamental policy of the Ralston Clothing Company, when considered apart from the specific terminology of the president, appears conservative and sound. An industry of this character, varying as it does widely from year to year, is not only justified in setting up reserves in good years against less favorable conditions which it must expect in the future, but indeed it is hardly justified in not so doing. If it fails to set up such reserves, it will in the long run almost inevitably get into trouble. A study of the industries of this country which have survived from generation to generation, in my opinion (for the necessary research to find the facts has not been done and nothing but opinions inadequately supported by personal knowledge of specific cases is possible) would disclose the fact that a very large proportion have in some way or other followed the general policy here outlined. Plant values are written down to a point far below actual values and

TABLE B-1

RELATIVE WHOLESALE PRICES OF LIVE STOCK, BY MONTHS, 1917-1921

(Monthly average 1913 = 100)

	1917	1918	1919	1920	1921
January 15.....	121	179	192	173	120
February 15.....	134	180	192	177	117
March 15.....	152	186	200	178	123
April 15.....	166	193	214	181	112
May 15.....	168	197	218	177	109
June 15.....	167	194	213	175	
July 15.....	163	195	222	176	
August 15.....	168	202	221	172	
September 15.....	182	206	191	174	
October 15.....	186	196	174	166	
November 15.....	177	190	169	147	
December 15.....	181	191	164	121	

TABLE B-2

THE RELATIVE WHOLESALE PRICES OF 10 LEADING FARM CROPS,
BY MONTHS, 1917-1921

(Monthly average 1913 = 100)

	1917	1918	1919	1920	1921
January 1.....	149	214	221	241	129
February 1.....	159	220	211	252	123
March 1.....	168	234	209	255	120
April 1.....	183	234	220	271	113
May 1.....	228	229	238	294	104
June 1.....	236	221	249	309	109
July 1.....	235	222	252	304	
August 1.....	250	228	267	268	
September 1.....	227	238	258	239	
October 1.....	225	235	235	202	
November 1.....	212	219	227	163	
December 1.....	205	215	230	135	

¹ Fictitious name used for purpose of disguise.

inventory values kept on a basis which gives protection against market fluctuations in a host of well-managed concerns. The fact is that the earnings of one good year are often not real in any effective sense and that the manager who thinks of them as real, fools himself.

Certainly the bank which criticizes its customers for conservative valuations and for writing down inventories is giving advice which will inevitably lead to bad loans. The federal income tax, with the attendant strict supervision of depreciation accounts and reserves and of inventories of stock in trade by the Treasury Department, has had just this kind of effect and undoubtedly has resulted in far less conservative bookkeeping on the part of the better managed and stronger group of corporations. This result is one of the unfortunate by-products of our income tax situation, balanced, of course, by its effect in tending to increase the attention given to reserves by the less conservatively managed group of companies.

On the substantive side, therefore, my opinion is that the Ralston Clothing Company was thoroughly justified in setting up reserves to average its good year with expected poorer years to follow.

In this case it made two distinct statements, in substance before and after adjusting its books for the year. The published statement for general use, of course, should have been given to the bank with the other, and an explanation of the divergencies between the two. So handled, the bank officers should have looked on the situation as a source of strength for the loan rather than of weakness. From my standpoint, the fact that the published statement was not actually handed to the bank appears unimportant, though clearly calling for a request for all such published statements in the future with an appropriate explanation in each case.

So far as the exact accounting method followed by the Ralston Clothing Company in getting at a highly desirable result is concerned, I think it could have been improved. The statement of facts implies that some items of the inventory were omitted from the statement, and liabilities were included without the balancing assets. This is not a proper method of accounting. A better and proper way to get the same result would have been through setting up an actual reserve for depreciation of inventory of \$50,000. This is the clearest way to handle the situation and the method least likely to result in fooling the management on its costs in future transactions, or misleading other interested parties. That there is no inherent objection to writing down inventory values is, however, indicated by the fact that properly managed banks customarily handle their property accounts in some such way. Ample reserves on inventories enable a business to average its losses over longer periods than one year; they are used by some of the largest and best managed concerns in the country, and were es-

pecially effective during the war; when frankly handled, they indicate sound business.

In this case it appears to me that the bank officers found ethically objectionable implications in transactions which were in themselves perfectly innocent and, in fact, indicated good management. The form could have been improved and would have been if one sympathetic, competent officer of the bank had had one conversation with the customer. If further facts were added, as, for example, that the motive behind the published statement was not that given in the case but a desire to depress the market for the stock for personal profit and at the expense of others interested, an entirely new ethical problem would appear.

July, 1926

W. B. D.

148. LOUISELL IMPLEMENT COMPANY¹ I H.B.R. 527

COMMENTARY—A: In 1920 the agricultural implement business found itself with considerable inventories on hand, and with its customers impoverished by the sharp deflation in prices of farm products. Moreover, since these customers had bought agricultural implements freely during the prosperous years immediately preceding, the manufacturers found themselves in possession of notes receivable which were frozen. Farm implement manufacturers had followed the general policy of selling their output on long terms, and, during a period of steadily rising prices such as preceded the war, this policy had been safe. But the sharp deflation of agricultural prices, following the inflation, caused severe depression in the agricultural sections of the South and West, and affected both the volume of sales and the current collections of the agricultural implement companies throughout the country. The banks which had lent to such companies also found their loans frozen, and in several instances reorganization of the manufacturing company proved necessary.

November, 1925

H. B. V.

COMMENTARY—B: In deciding to attempt a reorganization rather than the liquidation of assets of the Louisell Implement Company, the banks were influenced primarily by the fact that the latter step would require a sacrifice of 80% of their loans to the company. Had the loss from liquidation been half this amount, or 40%, it is an open question whether the banks would have forced liquidation or attempted a reorganization.

¹ Fictitious name used for purpose of disguise.

Although banks have a duty both to assist their borrowers and to protect their depositors, like other enterprises they are operated for a profit. If borrowers become seriously involved, the situation often becomes crystallized into a question of how the banks can meet the situation with the least loss. If by liquidation the banks can secure a substantial part of their loans, the bank officials may force this step, but if by liquidation the banks risk a substantial loss, the bank officials frequently go to great lengths to resuscitate the enterprise.

Because of this practice, the company which has erred but slightly in its management often receives little assistance from the banks, while the company which has become hopelessly involved secures additional loans and the active assistance of the bank officials by virtue of the fact that to withhold these loans means a substantial loss to the bank.

There is a danger that where the manufacturing process extends over a long period of time, a company will place too much capital in inventory on the strength of a temporary increase in sales. Thus in the case of the Louisell Implement Company, where lumber required two years' seasoning before being used, the management placed such large amounts of capital in inventory that additional loans were needed from the banks. Similarly, where sales to farmers were by necessity made on long credit terms, the additional capital which was necessary to carry the receivables was a further cause for an increase in the bank loans. As indicated by an examination of the balance sheet, both the stock-turn and current ratio were decreasing rapidly. When the farmers proved unable to pay the notes, the current assets of the company became frozen. Since both the manufacturing and selling processes required long-time use of capital, the banks were practically forced to adopt a waiting policy and were strengthened in this decision by the fact that the company had had an excellent reputation over a long period.

One phase of the problem which should not be overlooked is the fact that the company sold notes through notebrokers to about 200 small country banks. The bringing in of this large number of bank creditors increased the difficulty of forcing through a reorganization plan to which all would agree. On the surface it might appear that a holding company was an unnecessarily complicated device to use in this instance and that the work might have been done by a committee to which owners of stock pledged their shares. The large number of creditors involved, however, apparently made the formation of a holding company necessary to insure adequate current loans to enable the company to work out of its serious situation and to safeguard the banks through complete control of the entire operation.

Since the management of the Louisell Implement Company was at

least partly responsible for the situation in which the company found itself, it was desirable that it be removed and a new management be established in which all the creditors had confidence. Having once decided to go ahead with the reorganization, it was important that the banks convert the current claims into a less pressing form. This step was achieved by converting 60% of the bank loans into an issue of bonds on which payments could be deferred until such time as the company was able to meet them. At the same time the holding company arranged for additional bank credit to enable the company to buy supplies and to meet its pay-roll. Thus it could work off its inventory and become established again on a sound basis.

A reorganization plan which called for mere financial adjustment was not adequate. Unless the methods of operation were improved, difficulties might develop that would call for even further financial assistance. The banks took a sound position, therefore, when after providing for immediate financial requirements, they advised the discontinuance of the expensive and remote sales branches and the elimination of unprofitable lines of machinery.

June, 1926

C. E. F.

149. FAIRFAX NATIONAL BANK¹ I H.B.R. 535

COMMENTARY: The difficulties of the Milton banks arose from a violation of sound principles of banking in a period of inflation, and were attributable to the officers' interests in outside companies, which led them to extend loans to these companies and to load up their customers with securities of companies which they were promoting. At the end of 1921, when the position of the banks was such that failure impended, a halting recovery of general business was beginning to get under way. A large bank failure would have led to an impairment of confidence, and thus would have reacted upon the banking situation in that community, as indicated in the case. It was to the interest of the solvent banks, therefore, to work together to permit an orderly liquidation of the assets of the insolvent banks; and the means used served the purpose adequately. The absorbing bank was a strong institution that could not be affected seriously by taking over a weak bank.

The task of liquidating the assets of the Milton banks was made easier by the substantial business recovery which occurred in 1922 and 1923. The wisdom of the Fairfax bank in purchasing the deposits of the insolvent banks was also demonstrated.

October, 1925

H. B. V.

¹ Fictitious name used for purpose of disguise.

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¹ Commentaries to cases in Volume 1, found by the use of the index in that volume, may be found by reference to the alphabetical list of cases in Volume 2, pages v to xx.

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